

2020 SUSTAINABILITY REPORT

Pembina Pipeline Corporation



0

Zero
fatalities

\$10M



directly invested in the
community, a more than 30%
increase over the prior year

32%
increase

in the use
of Aboriginal
suppliers
from 2018

23%

decrease

in third-party
contractor total
recordable injury
frequency ("TRIF")
from 2018

64%

decrease

in employee
preventable motor
vehicle incident
frequency since
our intensive driver
training programs

\$109M

invested in
asset integrity
in 2019



Successfully
completed
remediation
of previously
contaminated
lumber mill, turning
a liability into an
asset, our Prince
Rupert Terminal



Launch of
**Carbon
Stand**

Launch of
**Inclusion
& Diversity
Stand**



Women now
represent

36%

of our Board of
Directors

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ABOUT THIS REPORT

Pembina has been publishing a biennial sustainability report since 2018. This 2020 report is our second full-length Sustainability Report and focuses on sustainability topics that are most material to our stakeholders and business. This report includes a summary of our progress since 2018, detailed performance on our priority sustainability topics, and our future sustainability plans.

Our Sustainability Reporting Approach

Reporting Period

January 1, 2017 –
December 31, 2019

Reporting Cycle

Pembina publishes a biennial full-length sustainability report and annual performance data updates.

Reporting Framework and Methodologies

The structure and content of this report were developed with reference to the Global Reporting Initiative ("GRI") Sustainability Reporting Standards. Consideration was also given to key Sustainability Accounting Standards Board ("SASB") indicators as well as the recommendations of the Task Force on Climate-related Financial Disclosure ("TCFD"). The methodologies used to collect and quantify information herein align with our peers, industry best practices, and applicable regulatory and environmental standards.

Report Scope

This report provides data for the 2017-2019 calendar years. Unless otherwise noted, the data reflects all Pembina majority-owned and operated assets. Assets which are jointly owned, and which Pembina does not operate, are excluded. Except where noted, the assets assumed in the acquisition of Kinder Morgan Canada Limited and the U.S. portion of Cochin Pipeline ("Kinder Morgan Acquisition"), which closed on December 16, 2019, are excluded in the reporting data. Any changes in performance data scope or methodology are described in a footnote or in the [Performance Data tables](#).

Sustainability Stories

Please see our website for our most recent sustainability - related [stories](#).

Data Assurance

The information included in this report has been subject to an internal review process. All data has been reviewed by the relevant executives responsible for each priority focus area. Except for financial information sourced from Pembina's audited financial statements, the information in this report has not been subject to a third-party audit process.

Report Structure

Material sustainability issues are organized into four focus areas, which provide the structure for this report.



**Safety and
Asset Integrity**



**Environmental
Stewardship**



Social Well-being



**Economic
Contributions**

Conventions

The terms "we", "our", "us", "Company" and "Pembina" refer to Pembina Pipeline Corporation.

All financial figures are expressed in Canadian dollars unless otherwise noted.

Advisories

This report contains forward-looking statements, which are based on certain assumptions and expectations and subject to certain risks, which could cause actual performance and results to differ materially. This report refers to certain financial measures that are not defined by Generally Accepted Accounting Principles ("GAAP"). For more information, please refer to "Forward-Looking Statements and Information" and "Non-GAAP Measures" in this report.

Your Feedback

Pembina fosters a culture of continuous improvement. In this regard, we invite stakeholders and interested parties to provide feedback on this report or any facet of our performance. Please email us at sustainability@pembina.com or visit the Contact Us page of our website for additional contact information.

Previous sustainability disclosures and additional information on our operations, legal form, ownership, and financial results:

- [2019 Annual Information Form](#)
- [2019 Annual Report](#)
- [2019 Annual Summary](#)
- [2020 Annual Management Information Circular](#)
- [2019 Sustainability Data Update](#)
- [2018 Sustainability Report](#)

For more information on sustainability at Pembina, please visit: pembina.com/sustainability

MESSAGE FROM OUR PRESIDENT AND CEO



Michael (Mick) H. Dilger
President and Chief Executive Officer

The energy industry has experienced unprecedented challenges in 2020, including the COVID-19 pandemic and the simultaneous decline in global energy prices; the rising social justice movement; and a renewed focus on climate change and less carbon intensive energy sources in the future. While this report focuses primarily on our performance through 2019, the events of 2020 significantly impacted us all and were top of mind as we prepared this report. Together, these events speak directly to the importance of sustainability and the environmental, social and corporate governance ("ESG") issues we are facing today.

Pembina issued our inaugural Sustainability Report in 2018, an important first step in our sustainability reporting journey. We are proud to release our 2020 Sustainability Report, which includes enhanced disclosures on additional metrics, demonstrating our commitment to continuous improvement in this important work. Throughout this report, we address the sustainability issues of greatest importance to our stakeholders and Pembina. We also share our overall approach, recent performance and future initiatives, which will shape the Company and our strategy going forward.

At Pembina, we are in business for all our stakeholders – customers,

investors, employees and communities. Our commitment to delivering benefits to each of these groups is the 'Purpose' of our Company and foundation of everything we do. We strive to be the leader in delivering integrated infrastructure solutions connecting our customers to global markets. In doing so, fulfilling our Purpose means: customers choose us first for reliable and value-added services; investors receive sustainable, industry leading total returns; employees say we are the 'employer of choice' and value our safe, respectful, collaborative and fair work culture; and communities welcome us and recognize the net positive impact of our social and environmental commitment. As we discuss in this report, there is clear alignment between ESG issues and Pembina's Purpose.

Hydrocarbon products remain an integral part of daily life, from the fuel used to transport people and products around the globe, to the cell phones and computers we use to connect. Pembina is proud to provide safe transportation for the energy that helps improve the quality of life for millions of people around the world.

Throughout this report we touch on many sustainability issues of interest to our stakeholders. I am delighted to report our achievements in the following areas:

Safety

Safety has always been our highest priority at Pembina and I am pleased that our safety record continues to exceed the average for our industry. In particular, we have realized a more than 60 percent reduction in preventable employee motor vehicle incident frequency since the roll out of our extensive driver training programs. I believe the most important thing we can do is ensure everyone goes home safely at the end of each day.

Prince Rupert Terminal

Pembina's propane export facility being constructed on Watson Island, BC, historically was home to an abandoned pulp mill and was considered to be a contaminated site under provincial legislation. As part of our lease commitment, we undertook extensive remediation efforts to clean-up the site. The B.C. Ministry of Environment and Climate Change Strategy has since issued Pembina the necessary approval to allow the site to be once again used for industrial purposes and we are continuing to progress construction on our facility.



Pembina's new Prince Rupert Terminal includes three above-ground storage spheres where propane will be offloaded from rail cars and stored until it is loaded on ships destined for international markets.

Employee Satisfaction

In addition to a safe work environment, we are also committed to providing long-term career growth as well as on-going training and development in a work environment that is inclusive, promotes equal opportunity and is built upon a culture of recognition. This philosophy has garnered acknowledgement as Pembina was once again named as one of Canada's Top 100 Employers and one of Alberta's Top 75 Employers, marking our third consecutive year achieving these recognitions.

Community Investment

We work hard to ensure the communities in which we operate experience a net positive impact from our presence and in 2019, we were more active in our communities than ever before. On top of the commitment we make to provide safe, reliable operations, we contribute to communities through employment and business development opportunities, as well as community investments. In 2019, we directly invested \$10 million in our communities, a 30 percent increase over the year before, while our employees volunteered almost 8,000 hours. In particular, Pembina and its employees across Alberta contributed over \$4.5 million to become the province's leading United Way campaign — an all-time high. Beyond direct investment, understanding local perspectives and the potential impacts of our operations on our communities is important to us. In particular, we are focused on partnering with Aboriginal and Tribal communities on health, education, training, employment and business development opportunities.

ESG Stands

During 2019, we were pleased to share our progress on developing two new ESG 'Stands', a term we use to describe 'what we stand for'. Pembina's Carbon Stand confirms that we are committed to reducing the greenhouse gas intensity in each

of our businesses. We are continuing to develop a strategy and specific targets to support this initiative and look forward to providing more details to our stakeholders in 2021.

Pembina's Inclusion and Diversity Stand confirms we are committed to diversity, equal opportunity and ensuring that our employees have the ability to thrive in an inclusive environment. Since the launch of this stand, a new advisory group has been established with a mandate to integrate inclusion and diversity efforts across the organization, and our Board of Directors and leadership team have committed to increasing diversity at the executive level by 2025.

Sustainability Oversight

In November 2020, we appointed Janet Loduca as our General Counsel and Vice President Legal and Sustainability, as we continue to formally incorporate ESG into our organization. Building on our foundation, this will help to move us forward on our ESG priorities and become aligned with our stakeholders.

In closing, as we continue our ESG journey, our focus will remain on continuous improvement, transparency and engagement, as we build upon our reporting and further integrate sustainable business practices throughout the Company. While we are proud of our accomplishments, including this report, we realize there is a significant journey ahead.

Thank you for your interest in Pembina's sustainability reporting and your ongoing support.

Sincerely,

Michael (Mick) H. Dilger
President and Chief Executive Officer
December 3, 2020

MESSAGE TO STAKEHOLDERS



Maureen E. Howe

Chair, Governance, Nominating and Corporate Social Responsibility Committee

As the world around us continues to change, so do the demands on companies like Pembina to adapt, respond, and contribute to a more sustainable future. Sustainability has taken on an increasingly significant role in all areas of Pembina's business, and the Board is no exception. The Board continues to expand its focus on and oversight of sustainability matters at Pembina. While the ESG landscape is rapidly evolving, it is clear that these factors are increasingly important to our stakeholders and our ability to address them will impact our commitment to create long-term value.

A central part of a sustainable business is having strong and effective governance, and we understand that this requires the Board to have a diverse composition of skills, knowledge and experience. It is this diversity and different perspectives among its directors that will support balanced debate and enhanced decision making. Earlier this year, we announced the appointment of two new board members, Ms. Cynthia Carroll and Mr. Robert Gwin. With these appointments, women now represent 36 percent of Pembina's Board of Directors. While we are proud of the progress we have made, we recognize that we can do better and as such, the Board recently approved specific and aspirational diversity targets under its Board Diversity Policy. We believe these initiatives,

among others, will strengthen our ability to achieve our strategy and deliver sustained value to our stakeholders.

As we look to the future, we are focused on redesigning our compensation methodologies, with ESG performance as a significant component. We believe that linking compensation to corporate performance on these important factors aligns with long-term value creation and our stakeholders' interests. The Board will continue to bring in experts from outside the organization to educate us on the dynamic landscape of ESG and how we can continue to improve both our business and disclosure practices. Finally, we are very supportive of management's development of an enhanced GHG strategy and related emissions intensity targets and we look forward to supporting the management team as they continue to integrate ESG strategies into the business.

Thank you for your interest in our ongoing sustainability progress at Pembina.

Sincerely,

A handwritten signature in black ink that reads "Maureen Howe".

Maureen E. Howe

Chair, Governance, Nominating and Corporate Social Responsibility Committee

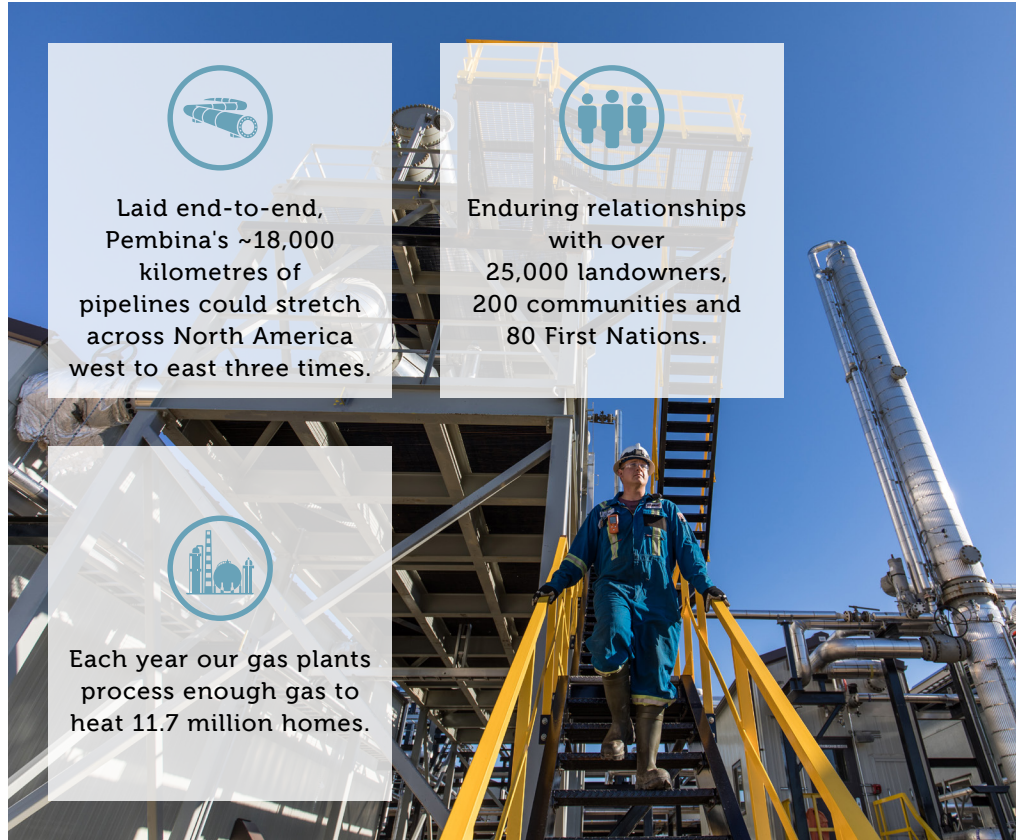
December 3, 2020

Performance at a Glance¹

		2017	2018	2019
Safety and Asset Integrity				
Health and Safety	Employee total recordable injury frequency (TRIF)	0.19	0.25	0.34
	Third-party contractor total recordable injury frequency (TRIF)	1.14	1.58	1.22
Asset Integrity	Pipeline integrity, geotechnical and facility integrity investment (\$ million)	82	77	109
	Reportable spills (#)	7	5	8
	Released substances (m ³)	4	8	38
Environmental Stewardship				
GHG Emissions	Direct GHG emissions (tCO ₂ e)	1,019,131	1,623,374	1,707,954
	Indirect GHG emissions (tCO ₂ e)	1,021,609	1,411,370	1,379,049
	Total direct emissions intensity (tCO ₂ e/BOE)	0.00154	0.00153	0.00158
	Total indirect emissions intensity (tCO ₂ e/BOE)	0.00154	0.00133	0.00128
Land Use and Biodiversity	Wellsites receiving reclamation certificate as part of wellsite reclamation program (%)	34	46	52
	Land reclaimed, protected, or restored (acres)	25.4	61.8	31.8
Waste	Total non-hazardous waste (MT)	244,427	527,565	543,395
	Total hazardous waste (MT)	18,615	54,372	51,867
Water	Total water withdrawal (million m ³)	2,219	1,870	1,555
	Total water returned to the environment (million m ³)	0.870	1,089	1,039
Social Well-being				
Aboriginal and Tribal Relations	Aboriginal environmental program trainees (#)	20	2	22
	Aboriginal suppliers utilized (#)	112	91	120
Community Investment	Direct investment in communities (\$ millions)	4.1	7.5	10.0
	Volunteering hours per employee (#)	2.5	2.9	3.2
Workforce	Permanent, full-time employees (#)	1,528	1,894	2,515
	Female employees (#)	427	563	634
	Aboriginal peoples (#)	65	78	88
	Total employee turnover (%)	7.8	7.8	8.6
Economic Contribution				
Our Financial Performance	Total economic value generated (\$ millions)	2,238	2,836	3,120
	Employee wages and benefits (\$ millions)	350	420	489
	Taxes paid to governments (\$ millions)	94	123	274

¹ Definitions and methodologies underlying these metrics can be found in the footnotes of the [Performance Data tables](#).

ABOUT PEMBINA



Laid end-to-end, Pembina's ~18,000 kilometres of pipelines could stretch across North America west to east three times.



Enduring relationships with over 25,000 landowners, 200 communities and 80 First Nations.



Each year our gas plants process enough gas to heat 11.7 million homes.

Calgary-based Pembina Pipeline Corporation is a leading transportation and midstream service provider that has been serving North America's energy industry for more than 65 years.

Pembina owns an integrated system of pipelines that transport various hydrocarbon liquids and natural gas products produced primarily in western Canada. The Company also owns gas gathering and processing facilities; an oil and natural gas liquids infrastructure and logistics business; and is growing an export terminals business. Pembina's integrated assets and commercial operations along the majority of the hydrocarbon value chain allow us to offer a full spectrum of midstream and marketing services to the energy sector. Pembina is committed to

identifying additional opportunities to connect hydrocarbon production to new demand locations through the development of infrastructure that would extend Pembina's service offering even further along the hydrocarbon value chain. These new developments will contribute to ensuring that hydrocarbons produced in the Western Canadian Sedimentary Basin and other basins where Pembina operates can reach the highest value markets throughout the world.



Purpose of Pembina

To be the leader in delivering integrated infrastructure solutions connecting global markets:



Customers choose us first for reliable and value-added services



Investors receive sustainable industry-leading total returns



Employees say we are the 'employer of choice' and value our safe, respectful, collaborative and fair work culture

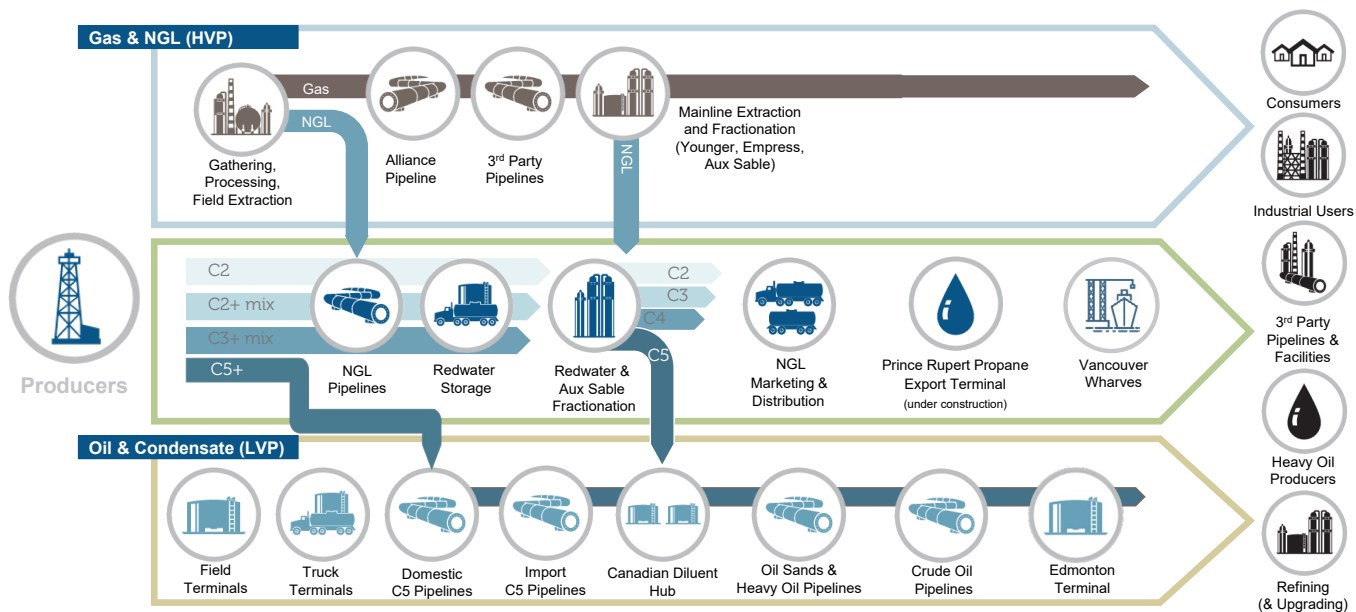


Communities welcome us and recognize the net positive impact of our social and environmental commitment

"We are in business for all of our stakeholders and we believe that only by serving all four of these groups well, will we be successful."

—
Mick Dilger, President and Chief Executive Officer

What We Do – The Pembina Store



C2 - ethane
C3 - propane
C4 - butane
C5 - pentane (condensate)

LVP - low vapor pressure
HVP - high vapor pressure

Picture top: Ribbon cutting celebration at our Redwater rail yard.
Picture bottom: Employees preparing meals through our employee volunteering program.

OUR APPROACH TO SUSTAINABILITY



Identifying Our Priority Sustainability Issues

Our business philosophy is grounded in a simple principle — 'do the right thing' — and our track record speaks to it. The structure and content of this report were informed by priority sustainability issues considered reasonably likely to have material impacts on the financial condition or operating performance of the Company.

Through extensive engagement with our four stakeholder groups — customers, investors, employees and communities — we continually monitor and assess our material sustainability risks. We want to know what is important to them, how our business activities may impact them, and the impact a potential risk or opportunity could have on our business objectives.

Our extensive engagement is further supplemented by our review and understanding of sustainability risks obtained from the following:

- regulatory bodies;
- government climate change policies and programs where we operate;
- research and analysis of reporting standards and frameworks such as Global Reporting Initiative ("GRI"), Carbon Disclosure Project ("CDP"), Greenhouse Gas Protocol, the Sustainability Accounting Standards Board ("SASB") and the Task Force on Climate-Related Financial Disclosures ("TCFD");
- our engagement with indices and ratings agencies such as Institutional Shareholder Services ("ISS"), Sustainalytics, S&P Robeco SAM / Dow Jones Sustainability Index and MSCI;

Picture above: Pipeline right-of-way.



Sustainability affects all stakeholders



Customers



Communities



Employees



Investors

Safety and Asset Integrity

Environmental Stewardship

Social Well-being

Economic Contributions

- feedback provided through direct engagement with investors and other market participants;
- research reports prepared by, and conference calls and webcasts hosted by, third-party equity research analysts;
- industry associations such as the Canadian Energy Pipeline Association ("CEPA"); and
- sustainability reports from other energy producing and energy midstream companies.

Priority sustainability issues are discussed in four focus areas within this report.



Safety and Asset Integrity

- Health and Safety
- Asset Integrity, including Emergency Preparedness



Environmental Stewardship

- Energy and Greenhouse Gas ("GHG") Emissions
- Land Use and Biodiversity
- Other Emissions
- Waste
- Water



Social Well-being

- Community Relations
- Aboriginal and Tribal Relations
- Community Investment
- Workforce



Economic Contributions

- Financial Performance
- Economic Value

Picture top: Employee conducting water testing in the field.
Picture bottom: Employee walking a pipeline right-of-way.

COVID-19

In response to the global COVID-19 pandemic in early 2020, Pembina took immediate steps to protect the health of our employees and ensure our critical infrastructure continued to operate safely and reliably. In connection to the crisis, Pembina activated our Corporate Emergency Response Plan. The objectives of the plan include minimizing illness and anxiety within our workforce, minimizing disruption to Pembina's business and ensuring business continuity.

Caring for our Employees

In addition to transitioning to a 'work-from-home' environment for many of our employees, Pembina worked to keep employees engaged on a daily basis, and prioritized health and well-being. In order to keep employees constantly informed, regular communications were provided and included a personal note from our Senior Vice President & Corporate Services Officer, as well as guidance from health authorities, tips for working remotely, resources on mental health and wellness, and more. Employees also had access to, and embraced, a new video and chat platform that enabled virtual collaboration and engagement across the organization.

To further support the well-being of our employees, Pembina implemented a daily status check-in system to monitor employee wellness. This also provided our Calgary Emergency Operations Center and Occupational Health teams with important information on the health and safety of our people.

As we began to slowly transition employees back to the office, it was with safety at top of mind. Returning employees were required to complete a 'Return to Office Orientation', which provided important information on our new office protocols. Those employees are also required to

complete a daily self-health check, wear a mask in public spaces, and assist in sanitization efforts, while building operators complete additional daily sanitization of shared spaces. Given the dynamics of the pandemic, we remain flexible to accommodate employees that have circumstances that prevent them from returning to the office.

Pembina has always recognized the importance of mental health and well-being and the unique circumstances presented by COVID-19 have increased levels of stress and anxiety for many. Pembina introduced a number of mental health initiatives, over and above our employee and family assistance program, to help our support staff including a company-wide "coffee and connect" webinar series, encouraging employees to take time off to recharge and increasing annual coverage for mental health expenses under the Company benefit plan.

Supporting our Communities

As the world continues to face the challenges and impacts from the COVID-19 pandemic, we recognize that Canadian charities and non-profits have suffered from unprecedented decreases in revenue and increases in demand for services as they respond to the pandemic and support vulnerable populations. Since the beginning of the pandemic, Pembina has taken direct and immediate steps to deliver assistance to our community partners.

To support these organizations, Pembina has invested nearly \$600,000 towards COVID-19 relief and focused our efforts on five key priority areas: food security, front-line health care and first responders, social service continuity, mental health and well-being, and education.

Sustainability Stories

Doing our part in communities during COVID-19. Read the full story [here](#).

Business Sustainability

In order to ensure the continuity of our business, we took steps to physically distance employees and identify critical infrastructure required to ensure uninterrupted service to our customers while maintaining the safety of our assets, employees, communities and other stakeholders. In addition, all Pembina leaders, and all essential employees who continued working at a Pembina site, were provided with guidance on how to control transmission of the virus as well as what to do should they or a colleague display symptoms consistent with COVID-19.



Employees maintain distance while volunteering their time during the Covid-19 pandemic at the Alex Community Food Centre.

Governance and Management Structure

We believe that positive corporate social responsibility starts at the top. Pembina's governance is structured around Pembina's Purpose, implemented by the Board, four Board committees, and Pembina's executive leadership through charters, mandates and policies.

Our governance program provides a comprehensive system of

stewardship and accountability amongst our Board of Directors, management, employees and contractors.

We are committed to the principles of good governance and Pembina employs a variety of policies, programs and practices to manage corporate governance and compliance.

BOARD	Audit Committee; Human Resources, Health and Compensation Committee; Governance, Nominating and Corporate Social Responsibility Committee; and Safety and Environment Committee	Pembina's Board has oversight responsibility for Pembina's business including stewardship of the Company's sustainability issues through various committees.
LEADERSHIP	Officer Team CEO & President, CFO and Senior Vice Presidents (SVP's)	Pembina's Officer Team supports the implementation of the Board's mandate, including meeting the Company's sustainability goals and commitments.
MANAGEMENT	Vice President, General Counsel and Vice President Legal and Sustainability; Other Vice Presidents; Employee Cross-Functional Sustainability Team	Pembina's Management Team , and the subject matter experts and employees it manages, provide the technical knowledge and support for Pembina's daily operations.

Strong stewardship and governance are essential to operating our business effectively, and we maintain high standards of governance and ethics throughout our business. We believe good governance is important for all our stakeholders.

Our Board, leadership and management operate under governance guidelines that outline our emphasis on:

- enhancing and preserving value;
- protecting dividends;

- meeting our commitment through our Purpose to our key stakeholder groups; and
- operating in a safe, reliable and environmentally responsible way.

The Board's Mandate and Committees

The Board of Directors is governed by a charter and oversees our business, provides guidance to the leadership team, monitors leadership activities and sets corporate policy. The Board is also responsible for developing our approach to corporate governance, including policies, standards and practices that ensure we operate ethically and meet or exceed the laws and regulations that apply to us. The Board's charter sets out specific matters that must be approved by the full Board and, accordingly, are not delegated or are only delegated in a qualified or partial manner. All significant operational, governance, financial decisions, risk management

decisions, and strategies that could affect our shareholders are reviewed by the Board.

The Board's charter includes:

1. ensuring an ethical culture;
2. strategic planning;
3. enterprise risk management, including insurable risks;
4. financial reporting and management;
5. succession planning and diversity; and
6. officer compensation.

Governance Guidelines

Board independence	✓	an independent chair of the Board
	✓	Audit Committee; Human Resources, Health and Compensation Committee; and Governance, Nominating and Corporate Social Responsibility Committee are 100% independent
	✓	majority of the Board must be independent
	✓	regular in camera meetings without management and non-independent directors
Board diversity	✓	commitment to diversity by gender, age, ethnicity, skills and geographic location
	✓	formal process for nominating directors and succession planning
Board effectiveness	✓	ongoing director orientation and director education program
	✓	clearly established and distinct roles of Board members and senior management
	✓	commitment to maintaining dialogue between management and directors
	✓	ability of the Board and Board committees to seek independent advice as appropriate
	✓	formal Board assessment and peer review process
Integrity and ethical conduct	✓	commitment to ensuring the integrity of internal controls and public disclosure
	✓	monitoring of overboarding, board interlocks, and other potential conflicts of interest
	✓	established equity ownership requirements for directors
	✓	formal policy on majority voting
Organizational effectiveness	✓	requirement of Board to oversee corporate strategy and manage organizational risks

See Pembina's website for additional information on the Board, which can be found in the following documents:


- Board Charter
- Position Description - Board Chair
- Governance, Nominating and CSR Committee Charter
- Safety and Environment Committee Charter
- Human Resources, Health and Compensation Committee Charter
- Audit Committee Charter
- Standards for Director Independence
- Corporate Governance Guidelines
- Board Diversity Guideline
- Majority Voting Policy
- Code of Ethics
- Whistleblower Policy

Pembina is committed to being a responsible corporate citizen and the Board oversees corporate stewardship. The Board recognizes the importance of ESG issues, and fulfils its mandated duties directly and by delegating the following ESG-related responsibilities to four standing committees:

- **Audit Committee** maintains oversight of the integrity of Pembina's financial statements, the reporting process, and the internal audit function.
- **Human Resources, Health and Compensation Committee** provides oversight of Pembina's approach to director compensation, employee health and wellness, employee compensation, executive performance and compensation, executive succession planning, and corporate inclusion and diversity. This committee also ensures the Company focuses on sustainability issues by including safety and environment metrics in incentive plan design and compensation decisions for executives.
- **Governance, Nominating and Corporate Social Responsibility Committee** is responsible for Pembina's corporate governance practices. This committee is also tasked with oversight of sustainability matters, including sustainable development, public awareness and consultation, issues management, environmental stewardship, external communications, government relations, Aboriginal and Tribal relations, community investment, and human rights. This committee also oversees the development of this sustainability report and engages external advisors to provide education and information on sustainability matters and to bring an independent perspective to their work.

- **Safety and Environment Committee** has oversight responsibility in respect of development, implementation and monitoring of risks and policies related to safety, asset integrity, and corporate security, as well as environmental management, including GHG emissions and biodiversity management.

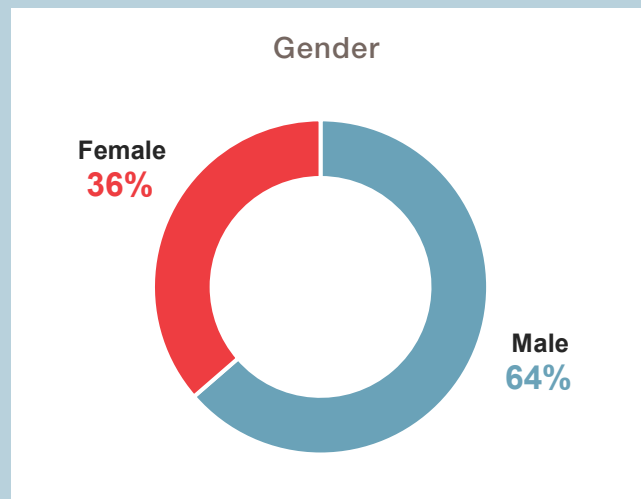
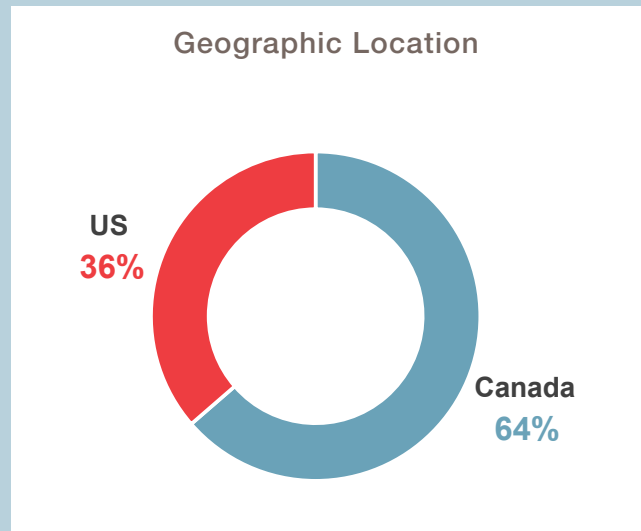
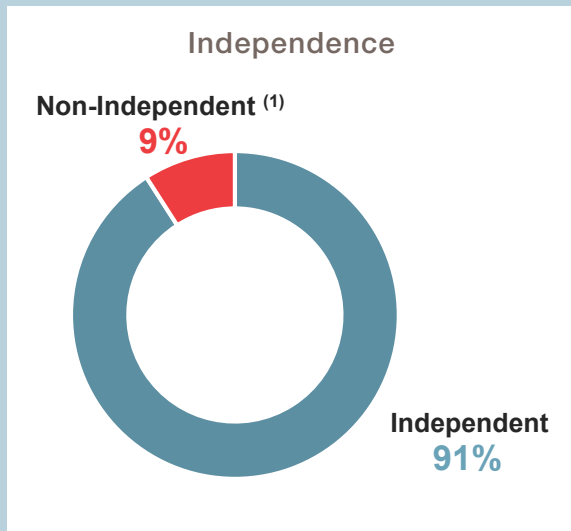
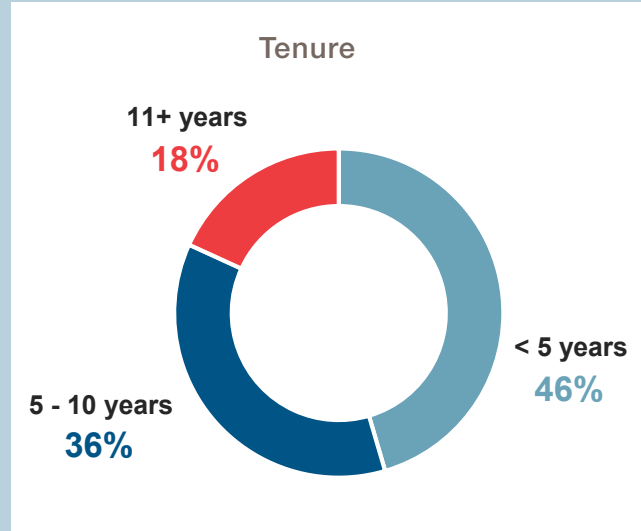
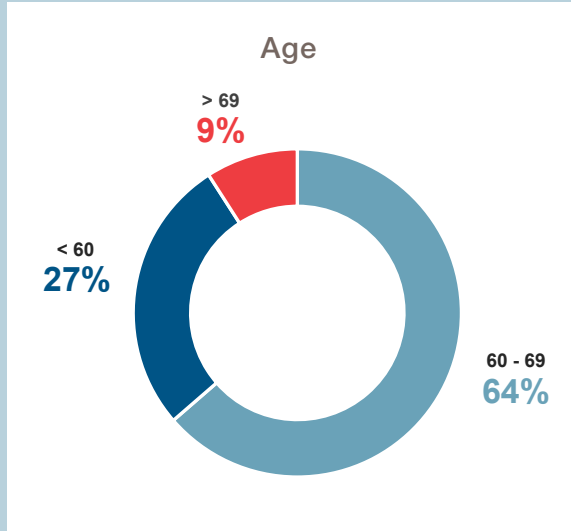
Each committee of the Board has a charter that specifies the business objectives that are to be achieved as well as the roles and responsibilities of the committee chairs and members. Each of these charters outlines the connection between the committee and Pembina's stakeholders and our Purpose.



Sustainability Stories

Advancing gender diversity in our workplace – interview with Leslie O'Donoghue. Read the full story [here](#).

Board Composition



¹ Mick Dilger - President and CEO

Board Diversity

We understand that investing in an inclusive and diverse workforce will strengthen our business and improve profitability – and this applies to our Board as well. To ensure strong stewardship, the Board needs to operate independently, have a prudent mix of relevant skills and experience, including industry knowledge and experience, a mix of age ranges and tenure, sufficiently diverse opinions to support balanced discussion and debate, and a manageable Board size to facilitate productive discussion and decision making.

The Board recently approved specific diversity targets under its Board Diversity Policy, which includes a target of maintaining female and male representation on the Board comprised of at least 30 percent each. In addition, the Board also aspires to have at least 40 percent of the independent directors be individuals who belong to one of the four designated groups in the *Employment Equity Act* (women, persons with disabilities, aboriginal people and members of visible minority groups).

In early 2020, we announced the appointment of two new board members. Mrs. Cynthia Carroll brings global business leadership experience, particularly in the industrial sector. Also joining the Board is Mr. Robert Gwin who has over 30 years of directly relevant leadership experience in the energy and financial sectors.



Mrs. Cynthia Carroll



Mr. Robert Gwin

In 2019, we released our employee-focused Inclusion and Diversity Stand, describing our aspirations and goals for future performance. You can read more detail about our Stand in the Workforce section of this report.

Executive and Management Committees

Pembina's Officer Committee, including the President and CEO, Chief Financial Officer, and Senior Vice Presidents, support the implementation of the Board's mandate, including our environmental, social and governance goals. A number of executive committees also support our ESG goals including the Disclosure Committee, Talent Management Committee, Investment Committee and Enterprise Risk Management Committee.

In November 2020, Pembina appointed Janet Loduca as General Counsel and Vice President Legal and Sustainability. She will oversee the development of a new long-term sustainability strategy.

Pembina is further supported by vice presidents, managers, subject matter experts and dedicated employees in supporting and delivering sustainable value to our stakeholders. A cross-functional sustainability team manages the development, data analysis and delivery of Pembina's sustainability disclosures, including responding to investor requests.

Pembina also works with numerous working groups, review panels, and peer industry groups to support our business and sustainability goals.

Executive Compensation

A key principle underlying executive compensation at Pembina is 'pay for performance'. We believe that linking compensation to strategy and corporate performance helps us attract and retain excellent people. It also motivates them to focus on the Company's success. This approach aligns our executives to long-term value creation and connects compensation awards with our shareholders' interests.

As outlined in more detail in our Management Information Circular, a component of employee and executive compensation is tied to safety and environmental performance. Specific considerations related to 2018 and 2019 compensation included Pembina's general performance relative to industry benchmarks; occupational and vehicle safety; pipeline and facility integrity; environment and process safety management, including spills and significant environmental incidents; and emergency response preparedness. We are currently in the process of redesigning our short-term incentive plan for 2021, with ESG performance as a significant component.

Common shareholders have the opportunity every year to vote for or against the Company's approach to executive compensation (to have a say-on-pay). Although this is an advisory vote and the results are not binding on the Board, the Board will consider the outcome of the vote as part of an ongoing review of executive compensation.

A full overview of Pembina's approach to compensation can be found in the [Management Information Circular](#), available on the Company's website.

Corporate Policies

Pembina's reputation is one of our most important assets. Our reputation stems from success in both our technical ability and business accomplishments. Our reputation is also reflected in how we get the job done. Pembina's corporate policies reflect our core values and beliefs:

<p>Integrity</p> <p>We ensure our activities are ethical and meet the expectations of our customers, investors, communities, and employees.</p>	<p>Stability</p> <p>We are committed to the long term.</p>	<p>Purposeful</p> <p>We are purposeful in the planning and execution of our business, operations and activities.</p>
<p>Citizenship</p> <p>We conduct ourselves in a manner that is ethical, responsible, safe and legal.</p>	<p>Respectful</p> <p>We treat our diverse stakeholders in a civil and dutiful manner.</p>	<p>Accountable</p> <p>Our operations are performed in an open, honest and transparent manner.</p>

Pembina's corporate policies provide guidance on how we interact with each other and our external stakeholders. These Policies are widely distributed, accessible and periodically reviewed to ensure they remain relevant and appropriate to the Company. On an annual basis, employees are required to acknowledge that they have read and will abide by Pembina's corporate policies. Through our onboarding process, we also ensure that our suppliers and contractors maintain an equivalent ethical and social standard and treat their employees as we treat our own.

Several of Pembina's policies are aimed at preserving a positive relationship with the physical and social environment in which Pembina operates and are therefore linked to sustainability matters and referenced in relevant discussions throughout this report. These policies include:

- Corporate Governance [Guidelines](#)
- Board Diversity [Policy](#)
- Health, Safety and Environment ("HSE") [Policy](#)
- Enterprise Risk Management Policy
- Code of Ethics [Policy](#)
- Alcohol and Drug Policies
- Aboriginal and Tribal Relations [Policy](#)
- Whistleblower [Policy](#)
- Corporate Security Policy
- Cyber Security Policy
- Privacy Policy
- Respectful Workplace Policy (Canada)/Policy Prohibiting Harassment and Discrimination (United States)
- Security Management Policy
- Disclosure Policy

In 2018, Pembina completed a company-wide update of our corporate policies to standardize and align with the changing business of the Company and Pembina's strategy and Purpose; to comply with new and existing laws and regulations; and to adhere to best practices in the industry. In addition, Pembina developed a new set of policies for the growing number of employees in the United States.

Further information on Pembina's corporate policies can be found in the Company's [Annual Information Form](#).

Business Ethics

Code of Ethics

Pembina's Code of Ethics Policy establishes a high standard of integrity and ethical behaviour to support Pembina's reputation and our relationships with our internal and external stakeholders. All directors, executives and employees of Pembina are expected to comply with the Code of Ethics Policy, which sets out principles for ethical conduct in the following areas:

- conflicts of interest;
- business relationships and fair dealing;
- compliance with the law;
- government relations;
- health, safety and environmental matters;
- integrity of financial information;
- disclosure and insider trading;
- stakeholder and public relations;
- privacy and confidentiality;
- protecting our assets and records;
- entertainment, gifts and other payments;
- workplace environment and relationships; and
- reporting responsibilities and procedures.

During 2019, Pembina created and delivered an e-learning program to make a more meaningful and

Pembina is committed to the highest standards of professional and ethical conduct in all activities. Our Code of Ethics Policy guides our conduct and helps us make the right decisions.

Visit our website to view our: [Code of Ethics Policy](#) (Canada and United States)

interactive experience for employees when reviewing and signing off on the Code of Ethics. The online module includes an introduction from one of Pembina's Vice Presidents to highlight the importance to the Company, right from the top. It also includes specific questions and examples of conflicts of interest. The e-learning roll out resulted in an increase in conflict of interest disclosures throughout the Company, which are reviewed and tracked by Pembina's Internal Audit group.

In 2019, Pembina engaged a third party to review the ethics and compliance programs, and best practices of companies in the oil and gas and other industries. Eleven elements were determined to be critical for an effective program. Pembina was deemed to meet at least a minimum threshold in nine of the elements. The overall assessment indicated that although no formal program existed, 62 percent of the requirements for an effective program already existed in the organization. Two areas – training and development, and third-party management – were deemed gaps, which Pembina has begun to address. First, in addition to the company-wide e-learning module discussed above, Ethics and Compliance has been incorporated into 'Evolve!', one of Pembina's internal leadership training programs. Second, further third-party management processes are being established. Pembina is working towards real-time attestation of contractor compliance for projects; the use of a vendor management software tool, ISNetwork; and establishment of contract templates for critical suppliers such as pipeline construction and engineering services within Pembina's supply chain. Please see the Supply Chain section of this report to read more.

Whistleblower Policy and Hotline

Pembina's [Whistleblower Policy](#) is designed to help us uphold our reputation and maintain public

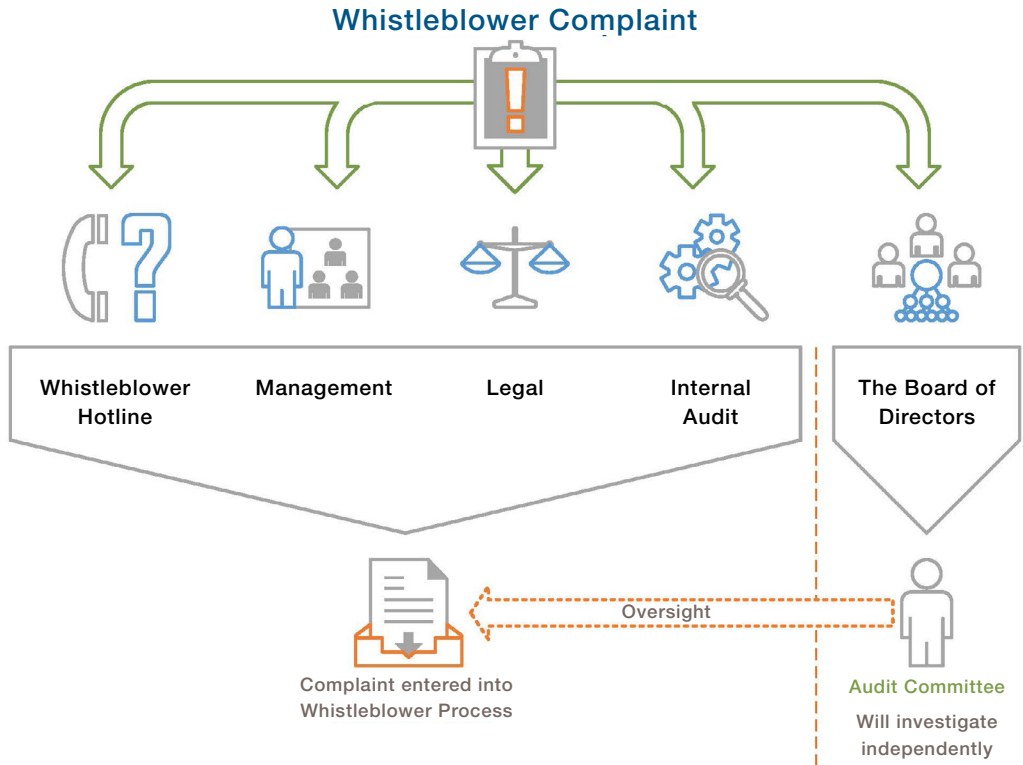
confidence by encouraging employees, consultants, contractors, agents and other stakeholders to act responsibly, and report possible unethical practices without fear of discrimination, retaliation or harassment. The policy includes examples of activities that should be reported, and the process whistleblowers should follow to file a confidential report. Additionally, each of Pembina's policies encourage employees to report breaches of policy through the Whistleblower Hotline.

The Whistleblower Hotline allows people to report anonymously by telephone or internet, or through our external legal counsel addressed as confidential for direct delivery to the Chair of the Audit Committee, at any time. Each whistleblower complaint is treated confidentially and promptly, and thoroughly investigated. Further, all complaints and investigations are reported to the Audit Committee of the Board.

Pembina's Whistleblower Hotline is hosted by a third-party service provider, EthicsPoint, which provides a confidential, accessible tool for both the public and Pembina personnel to report a concern, or ask a question, with the option to do so anonymously. Having an open channel of communication is simply good business. We believe the Whistleblower Hotline increases the effectiveness of our reporting and monitoring systems while supporting a culture of integrity and ethical decision-making.

Whistleblower Hotline

To report a concern, contact EthicsPoint at:
Pembina.ethicspoint.com
1-855-375-6799

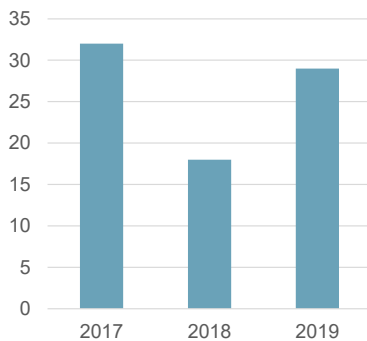


In 2019, we observed an increase in the number of complaints compared to 2018. This increase could be a result of the Company's growth (in particular in the number of employees and operating assets) or management initiatives, that have increased the exposure of the program. In 2019, Pembina incorporated information on the whistleblower program in both

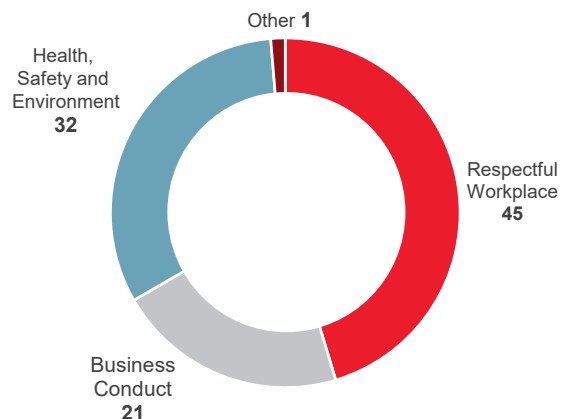
onboarding materials for new hires and the annual corporate compliance signoff required by all employees. As demonstrated by the visual above, there are many avenues to report a concern, depending on individual preferences and the situation. All reports are taken seriously, kept confidential, and promptly investigated in an unbiased, objective

manner by the Internal Audit group in accordance with Pembina's Whistleblower Policy and Procedures.

Whistleblower Reports by Year (#)



Whistleblower Reports by Type 2017- 2019 (%)



Bribery and Corruption

Pembina has zero tolerance for bribery and corruption, and works to prevent corrupt practices by integrating our principles into our Code of Ethics Policy to establish a high standard of integrity and ethical behaviour for our Board, leadership and employees.

Personnel are expected to disclose any potential conflicts of interests as they arise, and they are evaluated and mitigated in a timely and transparent fashion. Pembina prohibits employees and third parties from offering inducements to government, political parties, or candidates to obtain favourable business treatment or other advantages. Pembina personnel are expected to act honestly, deal fairly with customers, suppliers and competitors, and not to engage in any activity that could potentially result in an unfair competitive advantage through any unfair business practices.

Internal Audit

Internal Audit is responsible for assisting the Board, Audit Committee and management in verifying that appropriate governance is in place and to ensure sound managerial control over key aspects of Pembina's operations. Internal Audit will provide independent and objective analysis, advice and recommendations concerning the adequacy and effectiveness of risk management, control and governance processes in place to achieve the Company's objectives.

Enterprise Risk Management

Pembina continually works to mitigate the impact of potential risks to our business by identifying all significant risks so that they can be appropriately managed. To assist with identifying and managing risk, Pembina has implemented a comprehensive risk management program.

Pembina's Enterprise Risk Management ("ERM") Policy is intended to define ERM principles and specify expectations associated with Pembina's risk management activities and governance. All employees are required to sign off on the Company's Risk Management Policy, which outlines responsibilities for the identification, reporting and mitigation of risks. ERM consists of risk management practices and procedures applied across the Company on principal risks that affect the achievement of business objectives. All projects and business proposals require a risk management section to be completed. In addition, existing and emerging (early warning) risks are disclosed as part of each business unit's internally reviewed monthly scorecard.

The Corporate Risk Management group within Pembina reports through the External Affairs Division, up to the Senior Vice President, External Affairs and Chief Legal Officer, and is structurally independent of the operating business lines. As part of its mandate, the group facilitates the identification of the top risks for the Company, monitors and updates the mitigation measures to deal with those risks, and prepares enterprise risk materials for presentation to the senior executive and the Board of Directors.

To facilitate our risk review, we have an Enterprise Risk Committee made up of members of management. This committee meets at least quarterly to review the performance, appropriateness and current business environment surrounding

our risk management activities. Management reports to the Board of Directors about the risks that have been identified and, at least twice a year, the Board of Directors receives a summary of the Enterprise Risk Committee's review of risk identification, management and reporting, and any deficiencies identified, at semi-annual Board Strategy and Risk meetings.

See Pembina's [Management Information Circular](#) and [Annual Information Form](#) for additional details regarding risk management activities, including a description of key risks identified through this process.

Pembina maintains the following risk management policies:

- Enterprise Risk Management Policy
- Market Risk Mitigation Policy
- Counterparty Risk Management Policy
- Acceptable Use of Information Assets Policy
- Information Management Policy
- Corporate Security Policy
- Cyber Security Policy

Operating Management System

Pembina's Operating Management System ("OMS") is a systematic, consistent and proactive management approach that covers operations and engineering programs in a manner that ensures the safety and security of people, integrity of assets, and protection of the environment.

Pembina believes that predictable and sustainable results in our operations are built on a culture of continuous improvement, and risk management in health, safety and environmental performance.

Pembina's OMS is designed and executed on the following principles:

- Identify risks to health, safety and environment, and establish appropriate programs and procedures to reduce those risks;

- Develop and maintain standards, which meet or exceed legal, regulatory and industry requirements;
- Develop competency requirements that make sure all resources execute work safely;
- Ensure processes are in place for identifying and monitoring compliance of legal requirements relating to safety, security and protection of the environment; and
- Implement continuous improvement and quality assurance through monitoring, measuring and documenting the performance of the protection of our assets, people and environment.

The OMS operationalizes federal, provincial and state regulations within a framework that governs and guides

operating activities through policies, programs, standards, processes, procedures, competencies and qualifications.

Pembina's OMS is comprised of several individual programs, which are outlined below and referenced in relevant discussions throughout this report.

In 2020, Pembina reviewed and updated our OMS governance structure, and continued to advance several OMS programs and performance reporting to better support the planning, implementation, review, and continuous improvement of operations activities.

In summary, the OMS is Pembina's key tool in managing operational risks and defining the 'The Pembina Way' of operating.

Pembina's Operating Management System's Programs

Asset Integrity Management Program and Emergency Management Program	Damage Prevention and Public Awareness Management Program
Quality Assurance Management Program	Environment Management Program
Safety Program	Security Management Program
Operations and Maintenance Management Program	Operation Qualification Management Program

Operating Management Systems are designed to help companies define and achieve performance goals and stakeholder benefits, while managing the broad and significant range of risks inherent in the energy midstream industry.

"Operating" applies to every type of activity, from construction to decommissioning, throughout the entire value chain and lifecycle of the business and our products.

OMS offers an integrated approach and the flexibility to address some or all of a wide range of risks, impacts or threats related to occupational health and safety; environmental and social responsibility; and process safety, quality and security.

Supply Chain Management

Pembina has a large and diverse global supply chain. It is critical to Pembina's success that our key partnerships within this supply chain are aligned to Pembina's policies and core values. Pembina's Supply Chain Management ("SCM") team works collaboratively with Pembina's supply partners, the communities we operate in, and internal stakeholders to achieve Pembina's business objectives and operational requirements. SCM provides regular ongoing market information and highlights any supply risks.

The SCM team actively manages a broad supply base to maximize business value while minimizing or eliminating risk by developing preferred partnerships with critical material and service providers. Pembina's preferred suppliers are subject to robust performance and relationship management to ensure they are delivering in alignment with Pembina's policies and core values. Pembina expects all suppliers to adhere to the Company's Code of Ethics Policy.

Pembina has implemented a contractor management system to prequalify all contractors and suppliers before they can supply goods or perform services for Pembina. In July 2019, Pembina implemented ISNetworld ("ISN") to track insurance, health and safety programs, injury and incident statistics, and workers' compensation information on high-risk onsite service providers across Canada. In addition, all contractors must provide a Statement of Compliance with Pembina's safety and environmental standards and are required to undergo an orientation prior to accessing any Pembina site.

In addition, Pembina has a standard for identifying and classifying our supply base whereby it classifies suppliers into four distinct segments based on risk, criticality and spend profile. Many of the suppliers deemed critical will be required to undergo an ISO 9001 style quality and technical audit, facilitated by an independent third-party ISO qualified auditor.

39,689
tonnes of pipe
was produced for
Pembina in
2019,
of which
approximately
97%
was sourced from
recycled steel.

ISNetworld ("ISN") Program

Pembina uses ISN to strengthen our supply chain management. The program provides clear requirements, and different scorecards for high and low risk service providers and material suppliers.

Pembina anticipates continued growth of ISN to encompass the rest of our U.S. operations and

continued expansion of employee-level requirements. As we look toward the future, Pembina's critical suppliers will be required to upload a copy of their company Carbon Standards in support of overall compliance with Pembina's Carbon Stand. Further, SCM will be developing and formalizing our approved manufacturers' process, and a planned audit schedule for these critical equipment suppliers. These activities are scheduled to be completed early in 2021.



STAKEHOLDER ENGAGEMENT



We are focused on building strong, long-term relationships with our stakeholders. This means having open and honest conversations, while treating each other with respect.

Pembina's Purpose is centered on our relationship with our key stakeholders: customers, investors, employees and communities. These groups are core to our business and our commitment to them will propel us to new successes.

At Pembina, we believe in staged, carefully managed growth that respects the interests and concerns of our stakeholders while providing the energy transportation and midstream services our growing economy demands. Building long-term relationships with stakeholders based on mutual trust is a top priority.

Over the years, we have developed a reputation for honesty, transparency and treating stakeholders with respect.

How we engage

Pembina prioritizes stakeholder engagement and values our relationships with them. We engage with our stakeholders through a variety of methods. We proactively manage stakeholder questions and concerns by logging issues as they emerge, identifying and prioritizing needs, and developing appropriate actions to resolve any issues.

Our Stakeholders

At Pembina, we understand that the needs and interests of our stakeholders can vary. To enable robust and effective engagement, we work to understand and connect with our four stakeholder groups in a way that makes sense for them. We engage with our stakeholders on a daily basis, using a range of tools and activities. We focus on engagement that allows for feedback to be provided to Pembina so that we can continuously improve our operations, and further build and strengthen our relationships with stakeholders.

Customers

Pembina's customers, oil and gas shippers, and producers, care about safety, commercial, operational, financial, and logistical matters, as well as materials stewardship and supply chain sustainability. Pembina engages businesses in our environmental and safety approach through a range of methods, including: Health Safety and Environment pre-qualification screening and auditing; meetings (e.g., safety meetings, which include participants from Pembina employees, contractors, and partners); and through our daily operations (e.g., inspections and field audits).

Engagement Activities

Email, phone and face-to-face meetings on commercial, project development, operational or financial matters.

Investors

Pembina's investors have their own areas of interest related to our financial results and operations, including capital allocation, growth by acquisition or organically, and dividend growth and sustainability. Our engagement with investors includes, but is not limited to, various informal and formal meetings (e.g., Annual General Meeting, Annual Investor Days, analyst and investor meetings), financial statements, news releases, site visits, and information request responses. We value our relationships with our investors and are committed to keeping them apprised of our financial performance.

Engagement Activities

Investor Day, conference calls, institutional conferences, Annual General Meeting, face-to-face meetings, investor emails and site visits.

Employees

Pembina strives to create a positive and healthy work environment for our employees. The primary issues of interest for our employees include: health, safety and well-being; training and development opportunities; compensation and career progression; the environment; and inclusion and diversity. Pembina engages with our employees through a multitude of avenues, including employee engagement surveys, regular meetings, annual reviews, town halls, and monthly employee newsletters.

Engagement Activities

Company intranet, engagement surveys, newsletters, regular face-to-face meetings, town halls and emails.

Communities

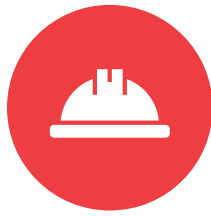
Pembina is committed to fulsome and positive engagement with the communities in which we have a presence. In order to understand the diverse communities Pembina engages with, we employ a wide range of methods to address the interests of local landowners, community members, and Aboriginal and Tribal groups. These groups share concerns for the environment, as well as local investment, infrastructure development, hiring, procurement practices, and the health, safety, and well-being of community members. We engage with affected communities at all stages of projects and periodically throughout every year. For more detail on how we work to build and strengthen our relationships with the communities we work with, see the Community Relations section of this report.

Engagement Activities

Open houses, brochures, partnerships with local and regional organizations, community outreach and investment activities.

Aboriginal and Tribal Engagement

Pembina is committed to meaningful engagement with Aboriginal and Tribal groups to consider their rights, desires and concerns related to our operations. Our engagement with Aboriginal and Tribal communities is described in the Aboriginal and Tribal Relations section of this report.



SAFETY AND ASSET INTEGRITY



Working safely is a way of life at Pembina. Our success depends upon protecting the safety of the public and our people throughout the communities where we operate.

We believe all incidents can be prevented and we work hard – through 24/7/365 monitoring, the use of leading-edge technology and comprehensive safety planning – to keep our systems and people as safe as possible.

Health and Safety

Approach

The foundation of our success is the safety of our people. We aim to minimize incidents with our corporate safety culture of 'Zero by Choice', and believe our employees and contractors can achieve this by recognizing that 'Safety Starts with Me'. Maintaining our energy infrastructure is integral to the health

and safety of the communities in which we operate. Not only does a strict focus on safe and reliable operations lessen the likelihood of incidents, it also reduces the cost of our operations over the long term and helps sustain our license to operate.

We reinforce our commitment to excellence in Safety and Emergency Management ("SEM") in our daily operations through various management programs, which



Working for Pembina means working safely.



DRIVING



HAZARD ASSESSMENT



WORK PERMITS



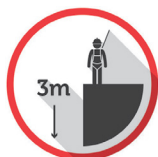
FOLLOW THE PLAN



ENERGY ISOLATION



CONFINED SPACE



WORKING AT HEIGHT



GROUND DISTURBANCE



LIFTING OPERATIONS

For more information on our Life Saving Rules, visit our [website](#).

includes stringent standards, principles and procedures, regular safety meetings, extensive contractor screenings, rigorous project inspections, review of potential hazards, and review of industry best practices. Compliance with all policies, procedures and regulations is a requirement and our Life Saving Rules are the basic rules that everyone should know and live by (see image above). Life Saving Rules are nine items selected that represent high-risk or high frequency items. These rules reinforce what employees

and contractors must know and do to prevent serious injury or fatality to themselves or others.

Contractor Safety

Pembina uses ISNetworld ("ISN") to manage contractor pre-qualification, orientation and compliance. The Construction Supervisor Onboarding Program and Contract Safety Representative Onboarding Process were created to ensure contractors in these roles are provided with a consistent and standardized

approach to Pembina's policies and safety culture while ensuring a clear understanding of their specific role.

Pembina's Safety and Emergency Management team is engaged early in project planning. Assessments are completed and plans are developed with our contractors and project teams to identify and control risks for the work to be completed. These plans are modified as the work changes and audited to ensure compliance.

The internal policies and programs that guide our work related to Health and Safety include:

- Health, Safety and Environment Policy
- Safety Program
- Emergency Management Program

- Security Management Program
- Damage Prevention Program
- Public Awareness Program
- Corporate Security Policy
- Alcohol and Drug Policy (Canada and United States)
- Vehicle Use Policy (Canada and United States)

- Respectful Workplace Policy / Prohibiting Harassment and Discrimination Policy (United States)
- Privacy Policy
- Code of Ethics Policy (Canada and United States)

Picture top: Pembina has a corporate safety culture of "Zero by Choice" and believes our employees can achieve this by recognizing that "Safety Starts with Me".

Picture bottom: Staff practice safety tactics on the ice during an emergency response exercise.

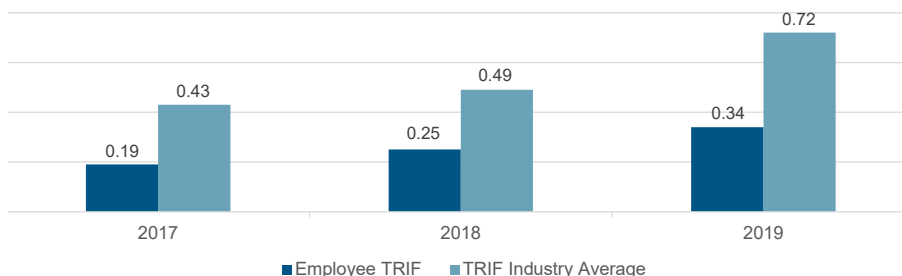
Performance

Pembina employees worked 4.7 million hours in 2019 and 3.9 million hours in 2018. In addition, contractors worked 4.1 million hours in 2019 and 3 million hours in

2018. Year over year, our employee total recordable injury frequency ("TRIF")¹ remains consistently better than the industry average² (see chart below). Contractor recordable incidents totalled 24 in 2018 with a TRIF of 1.58. This compares to

2019 contractor recordable incidents of 25, in addition to an increase of 35 percent in hours worked, resulting in a TRIF of 1.22. There were no fatalities amongst Pembina employees or contractors in 2017, 2018 and 2019.

Employee TRIF



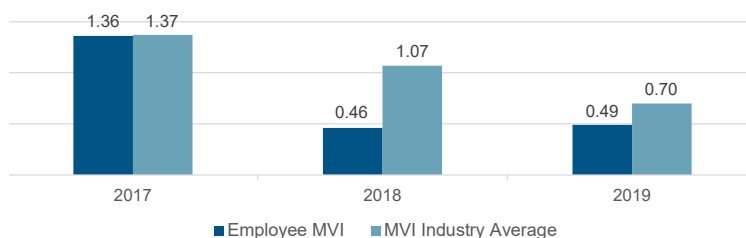
Pembina's Positive Safety Recognition ("PSR") program is designed to proactively engage all levels of the organization in positive safety discussions. Positive recognition helps to promote safety awareness and reduce or eliminate preventable incidents. Employees and contractors were recognized for doing things safely more than 10,000 times in 2019, an increase of greater than 50 percent over the prior year, demonstrating continued improvement in safety culture engagement.

Given the large geographical reach of our assets, many employees are

required to drive long distances as part of their job. Combined, employees and contractors drove over 41 million kilometres in 2019 versus 37 million kilometres in 2018. In 2018, Pembina implemented a number of driving improvement initiatives that were supported by all levels of the business. These included evaluating sites for driving hazards such as visibility of barriers and infrastructure, reviewing parking and traffic patterns, and reviewing expectations with contractors. As compared to 2018, Pembina continued to show admirable performance in preventable motor vehicle events, including

both employee and contractor performance. Severity of the events were minor to moderate in nature with no serious outcomes. The overall performance improvement of Pembina employees in 2018 was sustained in 2019 with a 0.49 preventable motor vehicle incident frequency ("MVI")³, again better than the industry average of 0.70². Contractor preventable motor vehicle incidents in 2018 totalled 20 with a preventable MVI rate of 1.26 as compared to 28 motor vehicle incidents in 2019, combined with a 22 percent increase in kilometres driven, resulting in a preventable MVI rate of 1.45.

Employee MVI



The Company established a fleet task force comprised of representatives from Supply Chain, Safety, Risk, Human Resources, and Operations to review, develop and support the fleet management program and safe driving initiative for Pembina's fleet, including commercial vehicles. Included in this effort was the

development of a driver scorecard, as well as implementation of telematics technology, among other things. The telematics program allows Pembina to better manage our fleet and support our culture of safety. Employees who operate assigned vehicles now have access to their own driver scorecard data and in-cab

audible alerts relating to speeding, harsh braking, and seat belt use. Pembina continues to increase awareness about existing driving habits, and promote and encourage safe driving practices. At the end of 2019, 100 percent of fleet vehicles had telematics technology installed.

¹ TRIF is defined as the number of recordable injuries per 200,000 hours of work.

² Industry average based on employee data from member companies reported by the Canadian Energy Pipeline Association ("CEPA"). A comparable industry average is not available for contractors.

³ MVI is the number of preventable incidents per 1,000,000 kilometres driven.

In addition, Pembina began the roll out of an Energy Based Hazard Recognition tool to prompt consideration of hazards that are not readily identified. Based on testing by researchers at the University of Colorado and Virginia Polytechnic Institute and State University, the energy method consistently improved hazard recognition by 20-30 percent.

Over 400 employees were trained in face-to-face sessions in 2019, with an online learning module being developed for future training. The culture of recognizing positive safety actions taken and identifying hazards before they become incidents is key to preventing losses of all types.

Hazard Identification Tool



Looking Forward

We are focused on continuously improving our preparedness and prevention processes and programs. This includes a safe driving online learning module, additional driver scorecard development and an operational excellence team. This

team will lead corporate-wide initiatives using telematics and other data tools to reduce overall kilometres driven to enhance productivity and reduce risk.



Asset Integrity

Approach

Maintaining the integrity of our energy infrastructure – pipelines, storage tanks, gas processing plants, NGL processing facilities and other associated facilities – is integral to the health and safety of the communities and environment in which we operate. We design, build and maintain our long-life assets by applying strict standards, and identifying and managing risks to support their ongoing integrity.

Pembina's pipeline and facility integrity management programs include several systems and processes designed to ensure

proactive and transparent management of our pipelines and facilities. These programs fall under our Asset Integrity Management Program ("IMP") and incorporate industry best practices designed to meet or exceed regulatory requirements. Our goal is to achieve enhanced safety, reliability and longevity throughout the lifecycle of our pipelines and facilities.

Pembina's Integrity team reports to the Senior Vice President and Corporate Services Officer. Pembina establishes targets related to Safety, Integrity and Environment Management metrics, including both leading and lagging indicators, which are reportable to the Board of Directors.

Pipeline Integrity Design

Integrity management begins at the engineering and design phase. At the early stages of building a new pipeline, we select pipeline routes that avoid geologically unstable or high consequence areas. To further reduce risk, we design our pipelines so they can be safely shut down and so that segments of the pipeline can be isolated at intervals along the system. Where appropriate, we take extra safety precautions such as increasing pipe wall thickness or depth-of-cover. When it comes to choosing materials for new construction, Pembina only uses products that have been manufactured to meet the highest quality standards and specifications.

Construction

Our qualified and experienced inspectors oversee all phases of pipeline construction. Each weld is assessed to ensure that it is sound. Prior to installation, we coat the entire external surface of our pipelines with materials designed to safeguard against environmental damage and corrosion. In addition, as part of pipeline operations, a very low-voltage electrical current, called cathodic protection, is applied to the pipeline, which further protects the pipe from corrosion. Once construction is complete, we put in place above-ground warning signs to clearly mark our pipeline right-of-way.

Information and Cyber Security

Pembina has important security measures in place to manage information and cyber security across our operations. Our Cyber Security team is responsible for developing and implementing related policies and procedures that guide our operations and employees. Overseen by the Senior Vice President and Corporate Services Officer, the Security team regularly reports

into the Enterprise Security Steering Committee.

Our Information Management Policy and Cyber Security Policy are reviewed by all employees annually. Employees participate in information and cyber security awareness training, which includes regular phishing campaigns, mandatory training for failed campaigns, and tabletop exercises. We also have internal reporting systems if employees observe any suspicious activity.

Operationally, we have incident response and business continuity plans in place, aligned with our Corporate Emergency Management Process. These plans are tested semi-annually and Cyber Security team members are trained annually on these plans through tabletop exercises. Additionally, as part of our Vulnerability Management Program, annual penetration and vulnerability tests are conducted by external third parties, in addition to regular reviews conducted by Pembina's Internal Audit team.

Operations

Our Operations team ensures our pipelines are operated safely and efficiently. Pembina employees at our control center in Alberta monitor our pipelines 24 hours a day, 365 days per year. Through our IMP, we use inspection technologies to detect corrosion and cracks in our pipelines. We protect our pipelines against possible damage by third-party excavators or construction activity by working with municipal planners, contractors and landowners along our pipeline routes. We also conduct routine right-of-way aerial patrols and are a long-standing member of the Alberta and British Columbia One Call systems — communication services that arrange for location marking of buried facilities before a ground disturbance takes place to avoid any incidents.

Abandonment

Abandonment is the final phase of a pipeline's lifecycle. When we decide to permanently cease operations of any of our pipeline systems, we follow the applicable laws and regulations. Through the abandonment process, we work with regulatory bodies to do what is best for the environment and the people living near the pipeline. This includes either cleaning the pipeline of all product and leaving it

Programs that guide our work related to Asset Integrity include:

- Asset Integrity Management Program
- Pipeline Control Management Program
- Operations and Maintenance Program
- Security Management Program
- Emergency Management Program
- Damage Prevention and Public Awareness Program

in place or removing the pipeline and filling in the ground.

Facility Integrity

Our Facility Integrity Program, part of our IMP, addresses operational safety and regulatory compliance for all equipment that operates under pressure. We execute scheduled maintenance at our facilities with the goal of meeting or exceeding requirements for pressure equipment, tanks and piping inspections. Scheduled maintenance is important to Pembina, as it allows us to ensure safe, reliable and continuous operation of our facilities.

Emergency Preparedness and Response

Pembina is prepared to safely and effectively respond in the rare event of an emergency related to, or impacting, our operations. We have a dedicated Emergency Management team that plans and prepares our Emergency Management Program. The Emergency Management Program includes standards and processes to prepare our employees with up-to-date technology and techniques to keep communities and the environment safe. This includes:

- Corporate and area-specific emergency management plans with a complete set of standards and processes to support the safety of the public, our workers and the environment;
- Predetermined strategies and tactics for incident response;
- Tailored responder training, including annual exercises and ongoing training; and
- Specialized response equipment strategically placed within our operating areas.

Emergency Management Plans

Our Corporate Emergency Management Plan contains corporate-wide response priorities, practices and procedures to support our site-specific or area response

plans. Area-specific plans are created for each area we operate in and their purpose is to aid, assist, direct and expedite the decisions and actions of company personnel, first responders, and contractors during an incident. Pembina's Emergency Response Plans ("ERPs") are reviewed, evaluated for effectiveness and updated on a regular basis. An ERP includes:

- Incident Command System roles and responsibilities;
- Contact information for key Pembina employees and support resources;
- Methods to notify affected stakeholders, local authorities, government agencies, and first responders;
- Identification of emergency response materials and equipment locations;
- Implementation of public protection measures such as environmental monitoring, isolation, sheltering, evacuation and installation of specialized equipment to isolate and minimize environmental impacts;
- Detailed mapping and/or diagrams; and
- References to additional supporting documentation relevant to the response.

Area-specific Plans

As part of our emergency planning, optimal locations throughout our operating areas have been identified for containment and recovery operations in the event of a spill. At each potential location, specific tactics have been developed and prepared to assist responders. These locations are known as control points and aid in a rapid response effort.

Responder Training

Pembina ensures that potential responders are adequately trained to respond to a release. Training sessions are held throughout our operating areas that focus on response issues specific to each area. These training sessions include:

- Tabletop exercises to review procedures;
- Functional and full-scale exercises to practice skills; and
- Equipment deployment to test our resources.

An additional component of Pembina's first responder engagement and continuing education is undertaken through our membership in the Canadian Energy Pipeline Association ("CEPA"). This includes CEPA's broad engagement initiatives with first responders to increase awareness and facilitate education for responding to emergency events associated with petroleum products. Finally, Pembina also participates in Western Canadian Spill Services exercises, as part of our membership in this spill co-operative.

Response Equipment

Pembina invests in specialized response equipment and associated personnel training. Our equipment is strategically placed within our operating areas to support a rapid and effective response. This structure provides responders with access to the required equipment when they need it.

Emergency Preparedness and Response Training

	2017	2018	2019
Emergency preparedness and response exercises completed (#)	45	51	70
Emergency preparedness and response training completed (# of responders)	187	429	744



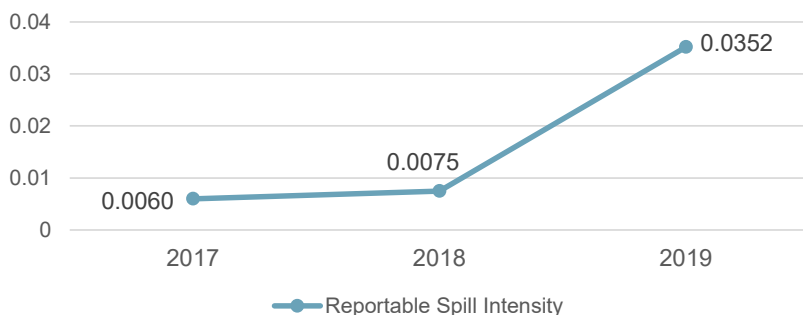
Performance

In 2019, we invested approximately \$110 million on pipeline, geotechnical and facility integrity activities with our total investment over the past three years amounting to \$268 million.

Pembina safely delivered 99.9999% of volumes shipped in 2019, consistent with prior years.

In 2019, Pembina had eight reportable spills, an increase from the five reportable spills in 2018, and a reportable spill intensity of 0.0352 m³ spilled/mmboe delivered. The total volume of released substances from all eight reportable spills in 2019 amounted to 38 m³, including one notable release at the Syncrude Terminal, which accounted for 35 m³ of synthetic crude oil. All released product was fully contained on site and did not extend to the neighbouring environment due to the facility's catchment berms.

Reportable Spill Intensity (m³/mmboe delivered)



Picture above: Staff deploy and test equipment in an emergency response exercise.

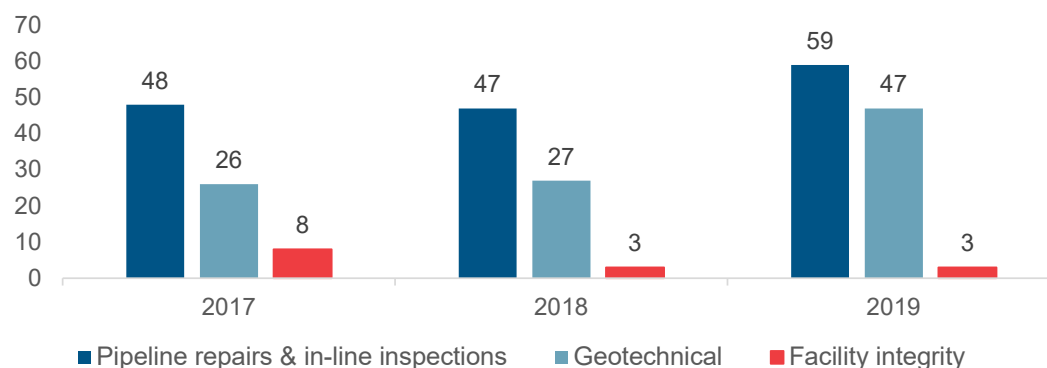
Reportable Spills

	2017	2018	2019
Reported significant failures (#)	0	0	2
Reportable spills (#)	7	5	8
Released substances from reportable spills (m ³)	4	8	38

Integrity Digs and In-Line Inspections

	2017	2018	2019
Integrity digs completed (#)	296	284	218
In-line inspections completed (#)	91	88	97
In-line inspection coverage length (km)	3,440	3,328	3,810

Integrity Management Investment (\$ millions)



Looking Forward

Key focus areas for the Asset Integrity group include completing required inspections, monitoring, repairs and mitigation to proactively address risks. Maintaining our goal of zero incidents continues to be a top priority. In addition, we will be executing on asset integration plans for the recently acquired assets from the Kinder Morgan Acquisition

and implementing a Pembina-wide one-call management system, which will improve damage prevention program effectiveness. Finally, we will continue to leverage technological advancements to enhance our ability to conduct inspections and monitoring in a safe and timely manner.



ENVIRONMENTAL STEWARDSHIP

Throughout the planning, construction, and operation of our assets, we are committed to taking actions that reduce Pembina's environmental footprint and ultimately result in a net benefit to the communities in which we operate.

Energy & Greenhouse Gas ("GHG") Emissions

Approach

Pembina understands the complexity of providing affordable, reliable energy to power the economy, raise and maintain global living standards while at the same time addressing the risks associated with climate change. In addition to striving towards our vision to be the leader in delivering integrated infrastructure solutions and connecting our customers to global markets, Pembina is taking

steps to reduce our environmental footprint through the reduction of GHG emissions and other impacts to the environment caused by our business activities.

Pembina's operations require various forms of energy including hydrocarbon fuel and electricity, to power the equipment and processes that deliver oil and gas products to market.

Being proactive in addressing our environmental impact helps Pembina mitigate and reduce risks associated with climate change, including those described in the following table:

Climate Change Risk

Risk	Impact
Energy market transition	It is possible that lower demand, leading to lower prices for oil, natural gas and NGL may be driven by changing consumer preferences, new technologies or a rapid transition to other forms of energy. This could negatively impact our producing customers and lead to less demand for Pembina's services, negatively impacting the value of our infrastructure assets.
Political and regulatory	<p>Changes in environmental, health and safety laws, regulations and enforcement policies, including those with respect to climate change, could result in significant new or higher operating and capital costs, including but not limited to: higher compliance costs; costs to adopt and deploy new practices, process and technologies; and higher energy and non-energy input costs. If Pembina is not able to recover the resulting costs through existing contractual terms or through higher future tolls, this could negatively impact Pembina's financial results.</p> <p>Changes in environmental, health and safety regulations and legislation, including those with respect to climate change, may also impact Pembina's customers and could result in crude oil and natural gas development and production becoming uneconomical, which would impact throughput and revenue on Pembina's systems and facilities.</p>
Physical and operational	Changes and/or extreme variability in weather patterns, as well as increases in the frequency of extreme weather events, such as floods, cyclones, hurricanes, droughts and forest fires, increase the potential risk for Pembina's assets, including operational disruptions, transportation difficulties, supply chain disruptions, employee safety incidents, and damage to assets, which may result in lower revenues, higher costs or project delays.
Reputation	Pembina's reputation could be negatively impacted by changing public attitudes towards climate change. Negative impacts from a compromised reputation could include revenue loss, reduction in customer base, delays in obtaining regulatory approvals with respect to growth projects, reduced access to capital, higher cost of capital, or decreased value of Pembina's securities.

Policies and programs that guide our work related to energy and GHG management include:

- Health, Safety and Environment Policy
- Environmental Management Program
- Asset Integrity Management Program
- Operations and Maintenance Program

Scope 1 Emissions:

Pembina's fleet of stationary combustion equipment, which accounts for over 80 percent of Scope 1 emissions includes compressors, turbines, heaters and boilers, and power and emergency generators. The stationary combustion equipment is predominately fueled with natural gas (i.e., greater than 99 percent). Other sources of Scope 1 emissions include incinerators, emergency flaring systems, fugitive emissions, vented GHG emissions (e.g., tank vents and formation CO₂), and the combustion of liquid fuels used by stationary and mobile equipment.

Scope 2 Emissions:

A large portion of Pembina's operations require electric driven equipment, that utilizes power from the regional grid, including certain equipment at gas plants, NGL processing plants, liquids pipelines and storage terminals. The power used from the grid accounts for all of the Scope 2 emissions reported in this document. Scope 2 emissions are calculated using published carbon factors for the regional grid power that is utilized at each asset location.

Many third-party energy and supply forecasts conclude that global energy demand will continue to grow and rely on hydrocarbon-based energy to meet that demand for many decades to come.

However, in the event that the risks noted in the table on page 36 materialize due to more aggressive policy and regulatory action, rapid technological advancement and/or changing consumer preferences, Pembina's current business model and strategy are designed to be resilient and mitigate these risks by:

- Meeting all GHG regulations affecting our business and continually working to decrease our energy consumption and intensity, to effectively decrease our GHG emissions;
- Continually looking for opportunities to minimize emissions through a focus on operational excellence, continuous improvement and high utilization of assets;
- Having a broad portfolio of assets along an integrated value chain, which provides a diversity of cash flows and enhances the competitiveness of our customers. This model helps ensure the resilience of Pembina's and our customers' businesses across a wide range of commodity price environments;
- Making investment decisions based on key tenets that ensure new projects can earn strong returns over a period of decades and protect against the downside risk of lower commodity prices. These tenets include: evaluation of the underlying geology to ensure assets are serving high quality reserves; a commitment to doing business with high quality counterparties; and reducing risk by underpinning most of our investments with long-term contracts (typically 10 to 25 years) with high take-or-pay commitments; and

- Evolving our business over the past decade, becoming increasingly diversified across commodities and producing basins.

Further, Pembina continues to evaluate additional opportunities and employ new practices in light of climate change risks and opportunities including:

- An increasing focus on ESG and climate change issues as part of our investment decisions. ESG has become an additional lens through which Pembina's Investment Committee and Board evaluate capital projects and acquisitions;
- Evaluation of various opportunities to construct co-generation facilities to power Pembina's assets. Pembina recently constructed a co-generation facility at our Redwater Complex and is looking for other opportunities to construct similar facilities. Co-generation facilities are highly economic projects that reduce Pembina's operating costs while reducing GHG emissions;
- Pursuit of LNG projects as part of Pembina's strategy to access global markets. In addition to improving the economics for our producing customers, Pembina believes greater use of natural gas, and LNG in particular, is critical to meeting the world's climate change goals by replacing the use of coal, primarily in Asia; and
- Evaluation of renewable energy investments and opportunities that can reduce overall emissions while providing competitive financial returns.

Through ongoing engagement with stakeholders, active participation with industry associations, and direct engagement with regulatory bodies, Pembina will continue to monitor and assess for material impacts to our business.

Performance

The increase in Scope 1 emissions from 2017 to 2018 is due to the full year contribution of emissions from the additional facility assets acquired from Veresen Inc. in the fall of 2017, including the Aux Sable gas processing and NGL processing facilities as well as Veresen Midstream LP's ("VMLP") Hythe and Steeprock sour gas plants. The increase in Scope 1 emissions between 2018 and 2019 is primarily attributed to the activation of the co-generation power plant at Redwater in the spring of 2019, which is also the primary factor in the decrease of Scope 2 emissions for facilities in the same period. In 2019, noticeable decreases in Scope 1 emissions from two regulated large emitters, the Kakwa River and Resthaven plants, were offset by expanded operations and associated emissions from the new Duvernay gas plants and increased production at the Musreau II/III gas processing plants.

Scope 1 emissions from our pipeline assets are largely a result of fuel gas compressors on our gas gathering system in northeast Alberta. In 2019, we increased our emissions inventory to include vented methane emissions from our fleet of above ground storage tanks. The Scope 1 emissions from our pipeline operations decreased in 2019 compared to 2018 due to reduced operational time of equipment on the gas gathering system, which was offset by the slight increase in emissions from storage tank venting.

The acquisition of the Veresen Inc. facilities assets and inclusion of full year operational data in 2018 also resulted in an increase in Scope 2 emissions. However, the added facilities improved the 2018 Scope 2 emissions intensity due to the additional production throughput. The Scope 2 emissions for pipelines increased in 2019 due to the increase in volumes shipped through the pipeline networks.

The combined Scope 1 and Scope 2 emissions intensity in 2019 was essentially flat over 2018 and slightly improved over 2017.

**Scope 1 and Scope 2
Emissions Intensity
(tCO₂e/BOE)**

2017	2018	2019
0.00309	0.00285	0.00286

In the spring of 2019, Pembina completed a new 45 MW co-generation plant at our Redwater Complex. The power from the co-generation plant resulted in a decrease of approximately 80 ktCO₂e in indirect emissions compared to 2018 power usage. Additionally, the optimization of waste heat recovery and utilization in the NGL processing production is continuing to further reduce the fuel spent in the pre-existing conventional heaters. This



During 2019, in an effort to reduce our impact on the environment, Pembina installed over 600 solar modules at our Drayton Valley and Grande Prairie locations. Combined, these two systems result in lifetime energy generation of over 6,200 megawatt hours. In the future, Pembina will look for further opportunities to install this renewable power source at additional offices.

co-generation plant is running near full capacity and the excess power generated (approximately 20 percent of total output, or 10 MW) is being

Pembina's Carbon Stand

We are committed to reducing the greenhouse gas ("GHG") emission intensity in each of our businesses.

Our Carbon Stand will result in the following intended outcomes. Pembina will have:

- Employees who are proud of working for Pembina because of our commitment to the environment;
- Communities that recognize our commitment to GHG reductions, resulting in our investment being welcomed;
- Demonstrated our commitment to GHG reduction, aligning with leading customers' strategies and actions; and
- Maintained and expanded our investor base, by demonstrating our commitment to GHG reduction.

placed onto the provincial power grid. The additional power placed onto the grid further improves the overall emissions intensity by displacing high emission intensity coal fired power within the province.

In 2019, Pembina developed a Carbon Stand (see box above), an aspirational statement describing our desired future performance and outcomes related to GHG management. This set in motion a commitment to pursue emissions reduction initiatives across the Company.

Pembina is continuing to enhance and refine the scope of our GHG emissions data collection and reporting. Normalizing data across the enterprise, including joint venture assets or operated assets from various jurisdictions with different calculation methods and regulatory requirements, has been a challenge. We continue to evaluate and update our corporate emissions reporting methodology and emissions inventory to ensure consistent carbon factors and calculation methods are employed across our inventory of emission sources. We are also working to incorporate emissions related data from newly acquired assets. The reported emissions data for 2017, 2018 and 2019 now includes all owned and operated assets. In addition, we are now reporting emissions information for methane, NO_x, SO_x, VOCs and total particulate matter, which can be found in our Performance Data tables.

Looking Forward

Pembina is continuing to evaluate and expand our GHG emissions disclosure. Going forward, we plan to include emissions data for fleet vehicles and further enhance our emissions inventory with remaining negligible emissions sources such as flaring activities from our liquid pipeline assets. Pembina will also be engaging a third party to provide assurance on our emissions inventory and reporting methodology to provide greater data consistency and replicability. Further, Pembina has commenced a process to establish formal corporate GHG governance and support the development of a corporate GHG strategy and emissions intensity targets. The focus will be to manage and reduce emissions intensity across the organization and guide and/or influence project and operational processes to ensure energy and air emissions are considered in the investment decision-making process. We expect to provide more details on the overall strategy and targets in 2021.

Land Use and Biodiversity

Approach

We strive to minimize our environmental impact during construction and operation of our assets by establishing baseline conditions prior to construction and applying mitigation measures to reduce the potential for impact throughout the full asset lifecycle. The diversity of environmental conditions in which Pembina operates results in the need to complete detailed environmental protection plans prior to commencing field activities. Pembina construction and operations personnel recognize that changes in schedule and environmental conditions may require additional field studies to ensure our plans and mitigations are appropriate and will reduce the impact from our activities. These additional studies could include soil assessments and wildlife sweeps, including migratory bird sweeps or protected species surveys to look for rare plants and animals.

Our Environment team, reporting to the Vice President, External Affairs, is informed by our Health, Safety and Environment Policy, and leads the corporate Environmental Management Program, as previously discussed. Pembina's Environmental Management Program outlines our approach to minimizing and managing environmental impacts throughout the asset lifecycle. Specific guidance is provided for activities such as topsoil conservation, watercourse setbacks and crossings, erosion mitigation, vegetation management, identification of protected species, environmental monitoring, and contaminated site management.

Before beginning a new project, Pembina identifies environmental hazards and risks, conducts environmental reviews and assessments, and uses this information to understand the potential effects it may have on air, land, water and heritage resources.

These pre-planning activities not only provide key information for mitigation of environmental impacts during construction, but also support operations and future land reclamation activities.

Policies and programs that guide our work related to Land and Biodiversity include:

- Health, Safety and Environment Policy
- Environmental Management Program
- Asset Integrity Management Program
- Operations and Maintenance Program
- Maintenance Management Program

In 2019, a wildlife monitoring program was initiated on Pembina's Phase VII Peace Expansion Project pipeline route. Trail cameras were set up to help the project team identify wildlife species in the area and to determine whether additional environmental mitigations should be put in place for construction and reclamation activities. Pembina engaged community members from Sucker Creek First Nation to install cameras that would monitor and recover data, and they actively participated in photo review and species identification. The program did not identify any sensitive species, and project construction commenced utilizing Pembina's standard Wildlife Management Program. Final results of the monitoring program will be shared with First Nation communities upon completion of the monitoring program.

Pembina also develops detailed Environmental Protection Plans ("EPP") in consultation with local regulatory authorities, Aboriginal and Tribal communities, landowners and other stakeholders to minimize our environmental footprint. By working closely with Aboriginal and Tribal communities, and stakeholders to identify potential risks and/or areas of concerns, we are able to incorporate their input into our project design and future operating plans. This helps to reduce potential for future harm to the environment.

Pembina has environmental inspectors and specialists in the field during construction to oversee construction activities, monitor compliance, and address any environmental concerns that may arise. Wildlife management can be a large component of environmental management during a construction project. Pembina's environmental inspectors ensure that all mitigations identified in a project's EPP are followed, with particular attention paid to the protection of animals protected under the Species At Risk Act ("SARA"). The Project, Construction and Environment teams work closely together to develop and enact the necessary protections to ensure that all species, including SARA species, are still able to thrive in their habitats during construction and subsequent operations.

Once the project construction or operational activity is finished, a follow-up post-construction monitoring ("PCM") assessment is conducted to ensure land reclamation is completed in a responsible manner that complies with all applicable regulations. The purpose of the PCM assessment is to: identify potential environmental concerns resulting from pipeline construction and operational activities; manage and reduce environmental impacts; assess the effectiveness of environmental mitigation measures during construction and operational

activities; and initiate corrective measures. While PCM assessments are required as part of some project approvals, Pembina has extended this critical review to include all construction projects and integrity work locations. As part of our Fox Creek to Namao Junction approval, the Alberta Energy Regulator included a condition to work with a First Nation group that participated in the project hearing to assess natural regeneration of traditional medicinal plants along the right-of-way, over a five-year period. Pembina, in consultation with Driftpile First Nation, developed a PCM plan that incorporated the traditional knowledge of Driftpile Elders and community members to ensure that the end goals of this unique PCM program were met.



Sustainability Stories

Pembina's biodiversity program – highlighting the restoration and revegetation of Driftpile First Nation's Traditional Lands (Condition ten Plan). Read the full story [here](#).

During operations and maintenance, we regularly inspect our facilities and pipeline rights-of-ways for leaks, ground movements, washouts or other abnormal surface conditions, such as erosion and ground settling, weed infestation, and unauthorized third-party activities that can affect the safety and operation of our assets and potentially have negative impacts on the environment. In addition, Pembina uses specialized equipment to detect changes in pipeline pressure, variations in tank levels or the balance of liquids transported through our infrastructure. The combination of visual and technological surveillance, along with other due diligence activities, ensures that if an environmental event does happen, Pembina is able to respond quickly, minimizing risk to our community partners and the environment.

For example, an aerial patrol on the Vantage Pipeline identified several environmental issues including erosion, ground settling, third-party damage, and livestock damage. Knowledge of these issues allowed us to plan and implement corrective action plans to address the deficiencies, ensuring continued safe operations.

Through Pembina's Environmental Management Program, environmental compliance audits of our assets are completed regularly to ensure that we continue to operate responsibly. Audit findings are communicated corporately, and required processes, training and plans are put in place to ensure that identified opportunities for improvement are actioned in line with Pembina's commitment to continuous improvement.

If environmental contamination is discovered during regular maintenance activities or following the release of harmful substances, Pembina quickly responds to minimize any environmental risks associated with the impact through our Liability Management Program. When projects are in the planning stage, the Environment team interfaces with the Projects

team to provide awareness to any environmental risks within the project area. Pembina has also undertaken to assess, risk-rank, remediate and reclaim our historical liabilities. The historical liabilities were risk-ranked in 2015 and a schedule of activities in support of remediation and reclamation was developed. In the last seven years, we have assessed 100 percent of high-risk and medium-risk locations to identify where we may have to complete further work to protect the environment.

As part of our Groundwater Program, Pembina installed groundwater monitoring well networks at many of our operating facilities as an early warning system to flag potential environmental risks. Samples are collected at regular intervals and analyzed for chemicals that are associated with the operations at that location. The results are used to map trends, gain early indications of soil or groundwater impact, and identify and initiate appropriate actions to protect the environment.

Although Pembina is not an oil and gas producer, it has a portfolio of legacy abandoned wellsites obtained through the acquisition of other companies. Pembina has a regulatory

Picture above: Helicopter monitors a right-of-way in River Crossing, Grande Prairie area.

obligation to clean up these acquired sites. We actively manage our inventory of abandoned wellsites through the assessment, remediation and reclamation process to receive a reclamation certification from the regulators. Since 2016, we have obtained 67 reclamation certificates, representing over half of our wellsite inventory and the return of 264 acres of reclaimed land. Work on the remaining wellsites is well underway and the program is projected to be completed within the next six years.

When the time comes to abandon or decommission our facilities, we perform all abandonment and decommissioning activities according to regulation. Environmental assessments are completed in support of developing remediation and reclamation plans. The end goal is to return our sites to a manner that ensures equivalent land capability, which is Pembina's obligation to our stakeholders from whom we have borrowed the land.

Performance

Included as part of our commitment to continuous improvement, Pembina's Environmental Management Program was modernized and re-released internally in 2018. The updated Environmental Management Program aligns with the goals and objectives of Pembina's

Operating Management System and defines how Pembina conducts our business in the environment and regulatory space.

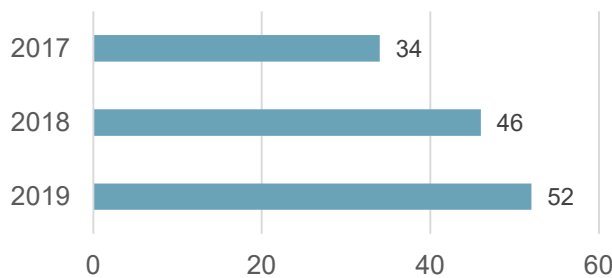
Pembina's Prince Rupert Terminal ("PRT"), is a propane terminal being constructed on Watson Island, BC, which is owned by the City of Prince Rupert. Historically, Watson Island was home to an operating pulp mill facility from 1955 to 2001, when the pulp mill went into bankruptcy and the facility was abandoned. Through tax recovery, the City of Prince Rupert became the owner of Watson Island. In 2015, the City began decommissioning and demolishing the former mill's infrastructure. In 2017, Pembina leased a portion of Watson Island for PRT. As this former mill site was considered a contaminated site under provincial legislation, Pembina's leasehold required remediation prior to being operational. From 2018 to 2019, Pembina spent approximately \$12 million on the remediation process which included: demolishing and disposing of the pulp mill's structures and foundations; remedial investigations of soils and groundwater; and delineation and disposal of contaminated soils. The BC Ministry of Environment and Climate Change subsequently issued the necessary remediation approval, which allows a portion of Watson

Island to be re-purposed for another industrial use.

As construction continued at PRT, rock blasting was required to create additional space and prepare the area for a railyard and rail unloading facilities. The completion of this work meant possible disturbance to nearby marine mammals. To ensure we understood the potential environmental impacts of this work, Pembina retained a third party to monitor marine mammal behavior and acoustic effects related to blasting activities. Through this monitoring, no adverse effects to either marine mammals or fish were observed.

Pembina transformed a site which was a significant liability into a key income generating asset, which benefits all stakeholders. We could not be more proud of this project.

Wellsites receiving reclamation certificate as part of wellsit e reclamation program (% cumulative)





Watson Island prior to commencing clean-up



Prince Rupert Terminal - October 11, 2020

In partnership with the Community Investment Program, Pembina undertook new conservation initiatives in 2019 including:

- \$1 million commitment to Ducks Unlimited Canada's Revolving Land Conservation Program, which will help to conserve 2,000 acres of wetland over the next 10 years;
- A \$250,000 sponsorship of the construction of the

Calgary Zoo's new Wildlife Conservation Center, which is dedicated to conservation breeding and research programs for various at-risk Canadian species; and

- Pembina personnel volunteered alongside the Calgary Zoo and local indigenous community members to collect sage grass in central Alberta for use within the zoo's Wildlife Conservation Centre.

Looking Forward

Pembina is developing an integrated vegetation management program, which will outline environmentally responsible vegetation management practices at all Pembina facilities in all our operating areas. The program includes: planning considerations; overall vegetation management strategies; weed identification, prevention and management; herbicide classification and application restriction; as well as regulatory compliance requirements.

Finally, we are developing internal training programs, which will support Pembina's Environmental Management Program. Training modules are planned in relation to:

- Clubroot Management Guideline. Clubroot is a soil-borne infectious disease of canola and related cruciferous plants;
- Wildlife Management, with a focus on Bear Awareness and Vegetation Management Guidelines (both mechanical and chemical control methods);
- Waste Management; and
- Water Management.

As an example, the clubroot training program will educate employees on: Pembina's approach to mitigation of clubroot transmission during pipeline construction and operations activities; different types and levels of equipment and personal cleaning; and various clubroot cleaning protocols.

Waste

Approach

Pembina is committed to resource re-use, waste reduction, and recycling programs, to provide environmental and economic benefits.

Waste is generated throughout various processes in Pembina's operations. The top three waste streams include contaminated soils and debris, hydrovac waste, and drilling waste. Contaminated soil and debris (e.g., wood, metal, etc.) are considered waste if they are impacted with hydrocarbons, salt or other chemicals. Hydrovacs are typically used to safely expose piping and other buried infrastructure to locate subsurface facilities prior to commencing ground disturbance work. Drilling waste includes fluids used in horizontal directional drilling, well workover and well abandonment activities. All waste generated is classified by Pembina or our contractors to determine the waste chemical constituents and hazards so that the waste can be handled appropriately.

The management of waste associated with Pembina's operations is mandated through regulation of energy pipeline systems and process facility operations. Additionally, construction or operating applications, approvals, or permits may outline additional regulatory requirements for the segregation, storage, treatment, disposal and records management of wastes originating from those facilities or projects. Pembina's waste management activities are performed in compliance with jurisdictional requirements. In areas where those are not established, Pembina applies requirements that are consistent with our Waste Management Standard. Pembina participates in the Waste Receiver Assessment Program to help confirm that our waste receivers comply with local legislations.

Furthermore, we are constantly monitoring regulations for changes that govern the management of waste. We

Pembina policies or performance standards related to waste include:

- Health, Safety and Environment Policy
- Waste Management Standard

also continue to conduct facility waste assessments and provide internal training on waste management as part of our continuous improvement program.

Performance

Pembina was an active participant in the waste reduction initiatives associated with the Calgary corporate head office building in 2019. Standard size garbage cans were replaced with miniature buckets, which attach to the side of the recycling bins. The smaller garbage bins encourage employees to decrease the amount of waste sent to landfill by encouraging increased recycling and composting activities. This initiative also serves to highlight the number of items that get thrown into the trash when they could be diverted from landfill.

During 2019, we conducted our first waste baseline assessment at our Redwater Complex as part of our continuous improvement program. The objective of this assessment was to assess the current waste management practices that are in place, compare those practices to regulatory requirements and provide direction for potential upgrades to the system. This successful waste audit identified many areas of improvement, which have subsequently been implemented, including creating training tools, enhancing storage requirements and publishing documentation.

The increase observed in waste over the last three years is largely correlated with new facilities including Redwater, VMLP and Aux Sable which were



placed into service in late 2017 and early 2018.

Looking Forward

Based on the success of the first waste baseline assessment, this program is going to be expanded to other locations in the future. These additional assessments will evaluate the effectiveness of the waste management program at the facility level and identify corporate opportunities for improvement by comparing waste assessments at facilities in different operational areas. Lessons learned will then be shared across the Company to support continuous improvement.

Water

Approach

We recognize the importance of water as a resource and its cultural significance to our Aboriginal and Tribal partners. Pembina strives to reduce the use of water whenever possible and avoid potential impacts to water resources throughout construction, operational and reclamation activities. All water withdrawn from the environment that is used in support of construction or operational activities must be permitted or licensed by the applicable regulatory authority. We strive to prevent any contamination of water that we use to allow us to return as much water back into the natural environment as possible. When we cannot return the water back into the natural environment, Pembina adheres to our corporate Waste Management Standards and local regulatory requirements to properly dispose of the contaminated water at regulated facilities. Pembina is continuously improving our compliance oversight with enhanced management practices and operating standards for the tracking, reporting and protection of water resources.

Our highest routine use of water is through the water cooling system used at Aux Sable's Channahon gas processing and NGL processing facility near Chicago, Illinois. Although the water volume used is relatively high (approximately 1 million m³/year), 100 percent of the water is uncontaminated and returned to the hydrologic cycle through evaporation. The next highest use of water within Pembina is through the development and maintenance of our hydrocarbon storage caverns situated in deep geological salt formations located near Edmonton, Alberta; southeast Saskatchewan; and Corunna, Ontario. The fleet of storage caverns requires freshwater to develop, wash and maintain their integrity. The brine solution that is created from the freshwater dissolving the salt formation during cavern development

	2017	2018	2019
Total water withdrawal (million m ³)	2.219	1.870	1.555
Total water disposed (i.e., regulated disposal facility or deep injection well) (million m ³)	2.049	0.780	0.152
Total water returned to environment (million m ³)	0.870	1.089	1.039

and washing is either stored for subsequent use as a ballast in cavern storage operations or disposed of via licensed deep injection wells. In 2019, approximately 500,000 m³ of water was used in the development of a new cavern at our Redwater Complex. An estimated 71 percent of that water volume (approximately 359,000 m³) was retained as brine solution for subsequent use in the cavern operations. The remaining brine solution was disposed of in deep injection wells. The third largest use of water is from the construction of pipelines and storage tanks, where water is primarily used to support horizontal directional drilling activities and hydrostatic testing of pipelines and tanks. Of the roughly 157,000 m³ of water withdrawn for construction-related activities between 2017 and 2019, 99 percent of that water was returned to the environment. Normal business operations outside of the top three water use activities described above require minimal to no water.

Performance

Pembina continues to improve our data management around water use. Historically, Pembina tracked water use data primarily at our major facilities, such as sour gas plants, gas processing and NGL processing facilities, water cooling systems and cavern storage. However, since 2017, we have focused more on data management of construction-related water, the vast majority of which is

returned to the environment.

Across our operations, higher water use in 2017 and 2018 reflects the development of a new cavern storage facility in southeast Saskatchewan, cavern development and maintenance activities at the Redwater Complex, and the addition of Aux Sable.

Looking Forward

Pembina will continue to focus on finding improvements in water management, data collection and reporting. Building awareness amongst our employees about the importance of protecting water resources, reducing water use where possible and tracking water volumes that are used will be ongoing initiatives. In addition, we are developing a Surface Water Management Matrix, which will provide guidance and planning considerations for surface water management practices across all of our facilities where surface water management is not stipulated by regulation or required within a regulatory permit or approval. The matrix will be available for use for all construction and operational activities within Pembina and is intended to guide decision making for current and future consideration, and operational scenarios.



SOCIAL WELL-BEING



Communities put their trust in Pembina, allowing us to operate in their backyards. We honour that trust by our active presence in the communities where we operate, ultimately providing a net positive impact.

We realize the process of our business is directly tied to the support we receive from our neighbours, many of whom are Aboriginal or Tribal communities. We take the time to get to know the Aboriginal or Tribal communities near our operations to learn and understand their perspectives. Meeting with Aboriginal or Tribal groups is also an opportunity to explore how we can work together on health, education,

training, employment and business development opportunities. Pembina has implemented a workforce development program, which aims to increase Aboriginal and Tribal employment at Pembina and within the industry, supporting a more diverse workforce. Pembina helps build community capacity through training and employment related to our projects and our operations.



Commitment to Landowners

Our asset base connects us directly to urban and rural communities, and the environment. Because of this connection, we manage our business in a way that maintains respect for all three through our commitment to responsible development and safe practices in all stages of our development and operations. This includes how we engage with landowners. Every effort is made to ensure that the land we use during construction is returned to the condition in which it was found. We recognize

that some of the areas we cross are agriculture lands and we work with landowners to assess value; monitor and compensate for loss of use along the right-of-way; address cattle management issues; sample for existing clubroot and other weeds; respect shelterbelts; and remove rocks that could damage agriculture machinery. In addition, we perform soil surveys to manage topsoil during the construction phase of our projects and ensure that it maintains its agricultural capacity.



Employee answers landowner questions.

Community Relations

At Pembina, building long-term relationships based on mutual trust with communities is a top priority. Part of building that trust is making sure we understand regional issues, so we can anticipate and manage the social and economic impacts of our operations on local communities. Pembina's Operational Engagement Program provides a consistent approach to building and maintaining relationships with stakeholders and Aboriginal communities across our operations. Pembina endeavors to enter into lasting and mutually beneficial relationships with stakeholders and Aboriginal

communities affected by our current and future operations based on the following guiding principles:

- **Mutually Beneficial:** We build authentic, long-term and collaborative relationships with our stakeholders to achieve a net positive impact in the areas in which we operate.
- **Transparent:** Our engagement efforts are conducted in an open, honest and responsible manner. We make measurable commitments and deliver on them.
- **Inclusive:** We conduct our engagement activities with affected stakeholders. We consider and look to integrate stakeholder feedback into our decision-making processes.
- **Respectful:** We clearly understand what communities value and what is important to them. We listen and seek to understand the interests of our stakeholders, communities and the environments where we operate.
- **Accessible:** We will provide information and be accessible to meet, discuss and resolve issues in a variety of ways and in a timely manner.

Picture top: Gardening activities at an employee volunteer event.

Picture bottom: Staff volunteer to wrap presents for Big Brothers Big Sisters during the holiday season.

In late 2018, the Community Affairs team developed Community Engagement District Area Plans for Pembina's operating areas. The purpose of these plans is to support both operational engagement needs, as well as commitments made as part of the CEPA Integrity First Program and other regulatory programs and objectives, such as Pembina's Emergency Management Plan and Damage Prevention and Public Awareness Program.

Operational leaders are responsible for the execution of each district plan and are supported by our Aboriginal and Community Affairs group. The purpose and goals of the Community Engagement District Area Plans are to:

- Foster a strategic, consistent and coordinated approach to long-term stakeholder and Aboriginal and Tribal operational engagement;
- Provide a governance structure that clearly outlines roles, responsibilities and accountabilities;

- Identify and map stakeholders, and Aboriginal and Tribal peoples where we operate and that may influence our business;
- Identify potential risks and opportunities that help inform engagement strategies; and
- Increase trust and performance with local and regional stakeholders, and Aboriginal and Tribal communities.

The feedback and input we receive from communities influences: where we install our assets; what steps we take to minimize disruptions to the environment; what local labour and businesses we may use; and how we can make a positive impact through our community investment program.

As we exited 2019, we implemented and executed on 10 Community Engagement District Area Plans. As we look forward, we will also be establishing Community Engagement District Area Plans for 100 percent of Pembina's operating areas, including the assets from the recent Kinder Morgan Acquisition.



Pembina's volunteer team engages in a little healthy competition while racing to make the most sandwiches for those in need at the Calgary Drop-In Centre.

Aboriginal and Tribal Relations

Approach

We recognize that in order to achieve our business goals, we need to work closely with communities across our operations, including Aboriginal and Tribal peoples.

The Aboriginal and Community Affairs team, reporting to the Vice President, Community Affairs, is committed to guiding principles outlined in our Aboriginal and Tribal Relation Policy and focuses on four key areas of work.

1. Consultation and Engagement:

Relationship building efforts that seek to understand community interests and concerns, through transparent and timely communication;

2. Community Investment:

Investing and participating in the well-being of communities where we live and operate;

3. Economic Development:

- **Training to Employment:** Fostering relationships with local agencies, facilities, educators and employment companies to establish dialogue that will identify qualified candidates.
- **Workforce Development:** Increasing Aboriginal and Tribal employment at Pembina and within the industry at large.

- **Procurement:** Engaging with Aboriginal and Tribal suppliers on potential opportunities to grow and sustain their business capacity and capabilities; and

4. Cultural Awareness:

Providing Aboriginal and Tribal Awareness training to Pembina's employees and contractors in the communities where we operate.

Many of Pembina's projects take place on lands where Aboriginal and Tribal communities may have rights and title. We strive to engage in meaningful consultation to understand potential impacts, seek mitigations, discuss possible benefits associated with our proposed developments, and ensure better planned, executed and remediated projects. Our engagement and consultation often exceed regulatory requirements and can take a variety of forms, such as personal meetings, desktop reviews, and site visits. Aboriginal and Tribal communities also have a unique understanding of the environment. We work with these communities to understand their perspectives and, where possible, incorporate this into our day-to-day business. Pembina is actively working to create awareness amongst Aboriginal and Tribal communities regarding environmental requirements and programs associated with our projects.

Our Performance

Pembina engaged in a comprehensive consultation and engagement program in 2019 for projects associated with our Peace Pipeline expansions. Through transparent and open communication, Pembina provided support for communities to undertake site visits that will identify potential impacts. Pembina representatives worked closely with Aboriginal community representatives to provide information on our mitigation and reclamation measures in order to address identified interests and concerns. Pembina received consultation adequacy from the Aboriginal Consultation Office of the Government of Alberta, with several communities providing letters of low or no concern in support of the expansions.

Prior to construction commencing on the Little Smoky Pipeline project, which is associated with the Phase VII Peace Pipeline Expansion,

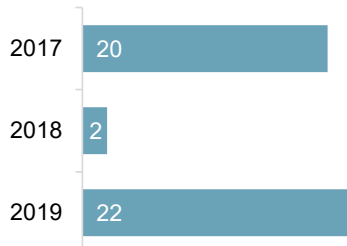


A member of the Aseniwuche Winewak Nation performs a traditional dance during the AWN Cultural Camp.

Related Pembina policies and programs include:

- [Aboriginal and Tribal Relations Policy](#)
- [Damage Prevention and Public Awareness Program](#)
- [Environmental Monitoring Program](#)
- [Inclusion and Diversity Policy](#)

Aboriginal Environmental Program Technicians Trained (#)



Pembina worked collaboratively with Steel River Group to host a pre-construction right-of-way blessing. Community members from Alexander First Nation, Alexis Nakota Sioux Nation, Sturgeon Lake Cree Nation and Sucker Creek First Nation attended with Elder Barb Goodswimmer of Sturgeon Lake Cree Nation providing the blessing. The blessing provided an opportunity for all in attendance to reflect on the safety and protection of the environment and the workers.

Pembina implemented our Aboriginal Workforce Initiative in 2019, whereby we work with communities, organizations and government partners to actively recruit Aboriginal candidates and assist them in preparing for long-term employment and career positions. Pembina's Workforce Development Program team meets regularly with community Indigenous Skills and Employment Training managers to coordinate training program goals and provide support in overcoming barriers. Aboriginal candidates often face when entering the competitive job market.

Pembina's Aboriginal Environmental Trainee Program provides trainees an opportunity to understand the pipeline construction process and related project environmental work. Program participants work with environmental planners and inspectors to learn about the procedures and construction methods used to install pipelines, while working to protect the environment. In turn, Pembina representatives are able to learn invaluable information through the Aboriginal perspective of the program participants regarding a project area's traditional land uses and activities. Due to the success of previous training programs connecting candidates to Pembina's Aboriginal Environmental Trainee Program, the number of candidates trained in 2018 was lower than prior years. In connection with increased project activity, 2019 saw a rise in successful

trainees and placements.

Pembina continues to be committed to creating and sourcing opportunities for Aboriginal and Tribal procurement for Pembina projects and operations. We actively seek to develop sustainable business relationships with Aboriginal and Tribal communities, and provide support to communities as they grow their business capacity and capability. In sourcing and awarding opportunities, it is imperative for suppliers to demonstrate to Pembina their Aboriginal economic development inclusion partnerships and efforts.

2019 saw Pembina's highest on record utilization of Aboriginal and Tribal suppliers. This was due to active engagement from our Aboriginal & Community Affairs team, coupled with vendors seeking additional strategic alliances with Aboriginal communities. As we continue our efforts to support economic development, we look forward to reporting on the Aboriginal and Tribal procurement spend in our future reports.

In 2019, 10 cultural awareness training sessions were offered to our employees in both the field and head office to foster greater awareness of local Aboriginal and Tribal perspectives. Pembina is committed to enhancing the knowledge, respect and consideration for, Aboriginal and Tribal peoples among our employees, consultants and contractors.

Through engagement and relationship building, we seek to understand community priorities and initiatives, and are pleased to support several of them through our Aboriginal Community Investment programs. For corporate-wide initiatives, we strive to provide funding to Aboriginal or Aboriginal-connected organizations with a broad reaching impact:

- Spirit North – This community expansion project, which began

in 2018, includes \$225,000 over three years. The goal of this project is to increase physical and mental health outcomes for the Indigenous children and youth and increase local capacity for community-led programming.

- Peace Wapiti Indigenous Education Initiative – Pembina's funding, including \$100,000 in 2019 and \$500,000 over five years, will help "Indigenize" classrooms and train teachers within the Peace Wapiti School Division on more effective ways of teaching Aboriginal students so that these students succeed.
- Women Building Futures – This organization is committed to serving the women who

reflect our community and the communities that surround us. Over 30 percent of the graduates from this program identify as Indigenous. Pembina invested \$100,000 in 2019.

- Metis Crossing – Pembina invested \$100,000 towards the development of a cultural gathering space.
- Western Cree Tribal Council – Pembina invested \$125,000, which enabled the Council to deliver a Pipeline and Facilities 101 Training Camp to approximately 120 students over five separate two-week training sessions in fall 2019.

Looking Forward

Pembina will continue to seek opportunities to build relationships with our neighbouring Aboriginal and Tribal communities to further understand each other's cultures, community priorities, and the nature of our projects and operations. We will look for unique training and education opportunities for community members to participate in, such as Damage Prevention & Public Awareness and Emergency Management. We will build governing and guiding documents to improve the efficiency and effectiveness of our consultation and engagement efforts. Lastly, we will work more closely with our Operating Districts to enhance Aboriginal and Tribal inclusion and reconciliation.

Working with Aboriginal and Tribal Communities

	2017	2018	2019
Aboriginal and Tribal communities engaged for services (#)	37	36	43
Aboriginal and Tribal suppliers utilized (#)	112	91	120



Construction right-of-way blessing ceremony with community members from Alexander First Nation, Alexis Nakota Sioux Nation, Sturgeon Lake Cree Nation and Sucker Creek First Nation in attendance along with Pembina employees.

Community Investment

Approach

Pembina strives to create lasting relationships through partnerships and volunteerism within the communities where we operate. We aim to improve the quality of life and sustainability of these communities, now and for years to come. Our approach is guided by our Community Investment Strategy, which focuses on five key areas:

- **Safety:** Safety is a top priority for Pembina, not only as an operator but as a member of the community. We support projects that help everyone access the tools and knowledge they need to respond to and mitigate safety risks.
- **Environment:** We believe in building for the future while protecting the present, which is why we fund projects that contribute to environmental conservation, stewardship and sustainability.
- **Education:** We invest in education, skills training, and capacity-building opportunities so that today's learners can become tomorrow's leaders. This includes: inspiring early involvement in STEM education and enabling academic success, ensuring that everyone can reach

their full potential through skills training, capacity building and investments that increase energy literacy.

- **Community Building:** We invest in events and community spaces that reflect the particular needs of communities where we operate. We support initiatives aimed at creating or renovating community spaces that are accessible for all, and initiatives or events aimed at bringing community members together.
- **Wellness:** We understand that communities thrive when they have access to exceptional health care and recreational opportunities. We invest to help promote healthy living, active lifestyles, wellness and enhancement of medical services.

The Community Engagement Steering Committee, comprised of Pembina executives and subject matter experts, oversees key investments and the performance and execution of the Community Investment Strategy. Local investments are managed and approved by teams in each of our field offices. Pembina has been a member of LBG Canada (London Benchmarking Group) since 2015, to continually improve our community investment management,

measurement and reporting through the sharing of leading practices, auditing and benchmarking.

Our Performance

Communities throughout our operations put their trust in Pembina and allow us to operate in their backyards. Through our Community Investment Program, we honor this relationship and give back to the communities where we live, work and play. In 2018, we invested \$7.5 million in our communities, a substantial increase over the prior year. Pembina and our employees also contributed nearly \$4 million to the United Way across Alberta and we were awarded the "Quantum Leap" award, recognizing this achievement. As our organization continues to grow, so does our commitment to communities. Our direct cash investment in communities increased to \$10 million in 2019, a greater than 30 percent increase over the prior year, meeting the goal we set out in our previous report.

Giving back is not just a perk of working for Pembina – it is a core part of our culture, and we are very proud to support our employees' outstanding dedication to their communities. Through our Pembina Actions That Help ("PATH") employee giving program, we support our

Related Pembina policies, strategies and programs include:

- Community Investment Strategy
- Stakeholder Engagement Strategy
- Pembina's Guiding Principles for Community Relations
- Damage Prevention and Public Awareness Program

2019 Community Investment

Direct cash investment in the community (\$ million)	10
In-kind investments and employee time during work hours (\$ million)	0.5
Total cash value of employee giving (\$ million)	3.3
Other (\$ million)	0.7
Total value to communities (\$ million)	14.5

employees with donation matching, personal volunteer grants, corporate volunteering and more. In 2019, Pembina employees spent almost 8,000 hours of Company time volunteering with our charitable partners, a 40 percent increase over the prior year.



Pembina will match any donation made by an employee to an eligible registered charity to no limit.



Volunteer grants recognize the community involvement efforts of Pembina staff with up to \$750 in personal volunteer grants per year.

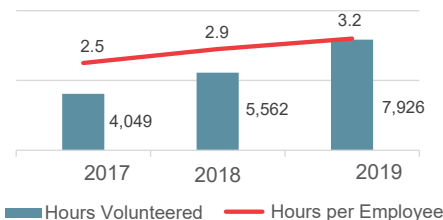


Pembina encourages employees to come together and give back as teams through corporate volunteer opportunities.

Pembina's 2019 United Way campaign saw employees from across our operations come together to raise just under \$4.5 million, a record for the Company and the largest campaign in the province of Alberta. This campaign focuses on investing in our communities in a way that is meaningful for our employees, retirees and Board of Directors. Pembina's United Way campaign was awarded the Gen Next Award, recognizing the Company for engaging the next generation (20 to 30 years old) through specific events, educational activities as well as engagement on the Campaign Committee.

Another big initiative undertaken in 2019 was the \$5 million partnership with the Breakfast Club of Canada to support breakfast programs across Canada over the next five years. Pembina believes all kids should be given the opportunity to reach their full potential and a good day starts with a good breakfast. We initially teamed up with the Breakfast Club in 2016 for the launch of Pembina's signature giving and volunteering program, 'Fuel 4 Thought' and this increased investment will help that program grow bigger and better than ever.

Employee Volunteering



Pembina employees celebrate the launch of a new breakfast program at Sturgeon Lake School.

Looking Ahead

In 2020 and beyond, we will be working to support new projects and operating areas, in particular integrating the US-based assets from the Kinder Morgan Acquisition.

As the world continues to face the challenges and impacts from the COVID-19 pandemic, we recognize that Canadian charities and non-profits have suffered from unprecedented decreases in revenue and increases in demand for services as they respond to the pandemic and support vulnerable populations. Teams across our operating areas are focused on funding organizations that are responding to the crisis on a local level, including local food banks, hospitals, mental health organizations, senior centers, and family support centers. Despite the pandemic, Pembina continued to honour all of our existing commitments.

Workforce

Approach

Powering Pembina's growth are our smart, creative and energetic people. Our people allow us to remain a disciplined and responsible energy transportation and service provider, and a trusted member in the communities where we operate.

Pembina has a variety of programs and services to attract the talent we need to support the ongoing operations and future growth of the Company. We look internally to fill job postings whenever possible as a way to provide our employees with career advancement and development opportunities. When we recruit externally, we provide a full onboarding experience including global relocation and immigration support.

Talent development plays a critical role in the overall success of the organization, enabling and inspiring employees to excel in their roles and achieve their career aspirations. We accomplish this by providing a flexible, evolving and measurable suite of high-quality training and development opportunities and services. These are based on best practices and delivered to Pembina team members in a way that is supportive and aligns with the goals of the business. Pembina's training programs are focused on safety and policy compliance, leadership development, business acumen, and technical skills development.

Leadership Development

Providing development opportunities is important to Pembina.

In 2019, Training and Development offered 162 sessions, with over 3,800 registrations.

At Pembina, we embrace inclusion and diversity in our workforce, and recognize the value that different perspectives bring to our business. The role of Pembina's Inclusion and Diversity Advisory group is to help guide the business on steps to improve employment equity and identify barriers that may be hindering our ability to hire and retain individuals from designated groups.

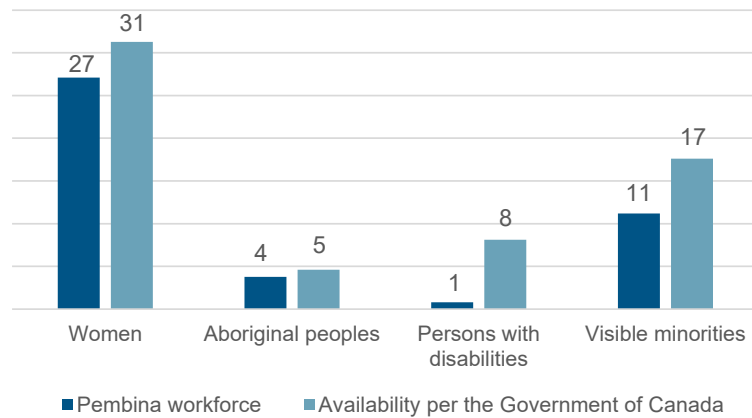
Our goal is to provide all employees with tools to enjoy a high level of physical, emotional and mental health and wellness in their lives. In addition to our comprehensive, industry-leading health and wellness benefits package, the Company provides an annual wellness spending account, free access to a gym and an employee and family assistance program ("EFAP"). The EFAP is a confidential counselling service available to employees or family members struggling with stress, mental health issues or other challenging circumstances.

Performance

We have experienced significant growth over the past few years and we have stayed true to our commitment to making Pembina a great place to work. Our number of permanent employees increased 24 percent in 2018 and an additional 32 percent in 2019, largely through acquisitions. Furthermore, all other employee categories saw increases over that time period as well.

While the percentage of female representation has fallen slightly over the last two years and is lower than availability per the Employment Equity Information in Canada, our representation is higher than the Alberta mining and oil and gas extraction industry median for all employees of 21.5 percent in 2017, the last time this data was published and the most closely comparable industry group. While we recognize that our female diversity is stronger than this industry group, we are striving for improvement and this will be a focus of our inclusion and diversity strategy.

2019 Workforce Summary (%)

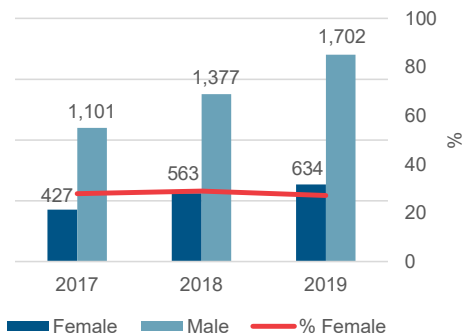


This workforce summary depicts Pembina's Canadian permanent employee representation in comparison to availability per the Government of Canada. Pembina is working on collecting diversity information for our U.S. employees to enhance our disclosure in this area.

Employee Turnover (%)



Gender Balance (# of employees)



Looking Forward

As we look to the future, our focus will be moving our Inclusion and Diversity Stand forward by creating a strategy and roadmap. A new advisory group, made up of a diverse group of participants, will be established with a mandate to integrate inclusion and diversity efforts across the organization. We are also planning to introduce our first pilots of employee resource groups, one of which focuses on women's leadership, and two others which focus on addressing inclusion and diversity-related barriers to women

being successful in commercial and capital markets roles. These pilots will be sponsored by senior executives. We are also planning to partner with the Canadian Centre for Diversity and Inclusion, as well as with Prospect, a not-for-profit organization focused on increasing inclusion, specifically for Veterans and People with Disabilities. As we continue to develop our strategy, our focus will remain on three topics: leadership commitment, enhancing employee experience, and influencing business practices.

Pembina's Inclusion and Diversity Stand

We are committed to diversity, equal opportunity and ensuring that our employees have the ability to thrive in an inclusive environment.

Our Inclusion & Diversity Stand will result in the following intended outcomes. Pembina will have:

- Attracted, retained and developed a diverse workforce that is creative and innovative;
- A work environment where employees feel valued and respected;
- Cultivated a workforce that is representative of the communities where we live and work;
- Developed a culturally aware

workforce that succeeds in global markets;

- Aligned our values with our customers by recognizing the importance of a diverse and inclusive work environment;
- Demonstrated that we are investing in a diverse and inclusive workforce to strengthen our business and improve profitability; and
- Attracted and retained investors who are committed to environmental, social and governance initiatives.

Sustainability Stories

Pembina's Top 100 Employers 2021. We are incredibly proud to be recognized as one of Canada's Top 100 Employers. Read the full story [here](#).



Pembina continues to garner recognition as a Top Employer.



ECONOMIC CONTRIBUTIONS



Maintaining a strong financial position is a cornerstone of our business and enables Pembina to continue to deliver consistent economic contributions to our investors and other stakeholders over the long term.

Our Financial Performance and Economic Value

Approach

For Pembina, our unwavering commitment to long-term value creation has been a key driver of our success. The growth and diversification of our value chain over recent years, combined with our unwavering commitment to prudent and disciplined financial management

has enhanced our strength and resiliency across economic cycles. This is the cornerstone of our business and has helped to ensure we are profitable and, as a result, able to deliver long-term and sustainable returns to our stakeholders as well as the global economy at large.

Pembina's Financial Guardrails

1

Maintain a target of 80% fee-based contribution to adjusted EBITDA

2

Target < 100% payout of fee-based distributable cash flow

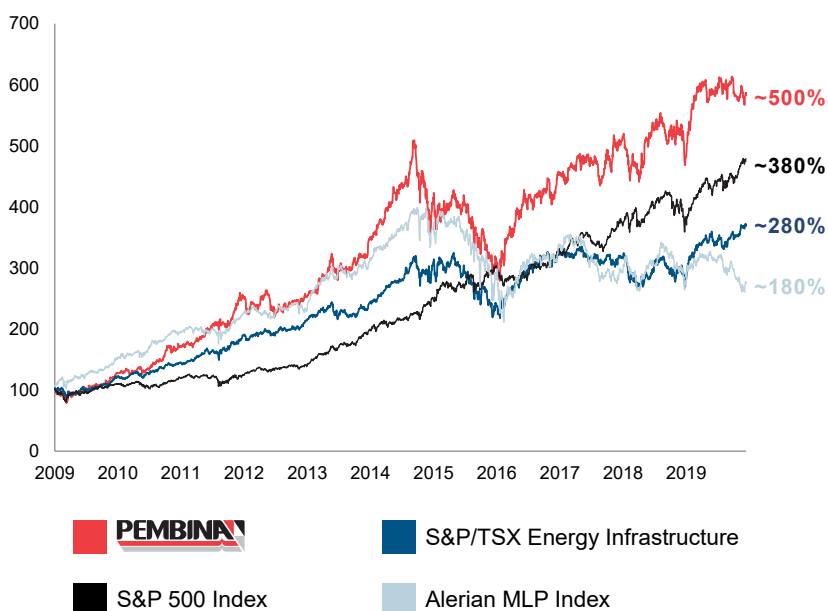
3

Target 75% credit exposure from investment grade and secured counterparties

4

Maintain strong BBB credit rating

Total Shareholder Return



Through our operations, we contribute to the development of communities where we have a presence and beyond in a variety of ways: job creation and our commitment to diversity and equal opportunity; capital investment within our project areas; government taxes and philanthropy; and volunteerism. As a result, Pembina is able to play a role in job creation, poverty alleviation, and the improvement of health and education outcomes.

Performance

We measure our performance in this area using Total Shareholder Return, a metric that includes share price appreciation and dividends paid to common shareholders. Pembina has a long-term track record of shareholder value creation. The Company has delivered a Total Shareholder Return of approximately 500 percent over the last ten years, or an approximately 18 percent compound annual average return.

Company Financial Snapshot

	2017	2018	2019
TSX common share trading price (\$/share)	45.51	40.51	48.13
TSX 52-week trading range (\$/share)	46.14-39.26	47.52-38.49	50.46-41.23
Market capitalization (\$ millions)	22,892	20,580	26,375
Total enterprise value (\$ millions)	34,556	32,235	40,468
Common share dividend paid (\$/share)	2.02	2.23	2.35
Yield (%)	4.75	5.63	5.24
Corporate credit rating	BBB/BBB	BBB/BBB	BBB/BBB

Pembina's growth has largely been the result of our extensive capital expenditure program and acquisitions. Through these activities and our ongoing operations, Pembina has injected billions of dollars into the

economy: providing jobs, procuring services, paying income, property and indirect taxes, investing in communities, and supporting local businesses.

Capital Investment and Acquisitions

	2017	2018	2019
Capital investment (\$ millions)	1,839	1,226	1,645
Acquisitions (\$ millions)	6,400	-	4,255
Total (\$ millions)	8,239	1,226	5,900

In 2019, Pembina successfully completed a major acquisition, the Kinder Morgan Acquisition, while also distributing \$2.7 billion in economic value. This includes approximately \$490 million in employee wages and benefits, and approximately \$275 million in payments to governments.

Economic Value Generated, Distributed and Retained

	2017	2018	2019
Net revenue (\$ millions)	2,238	2,836	3,120
Total Economic Value Generated (\$ millions)	2,238	2,836	3,120
Operating and general and administrative expenses (\$ millions)	263	324	299
Employee wages and benefits (\$ millions)	350	420	489
Payments to governments (\$ millions)	94	123	274
Payments to providers of capital (\$ millions)	1,029	1,561	1,659
Community investments (\$ millions)	4	8	10
Total Economic Value Distributed (\$ millions)	1,740	2,435	2,731
Total Economic Value Retained (\$ millions)	498	401	389

Looking Forward

Pembina typically provides annual financial guidance and our capital budget for the upcoming year in the fourth quarter of every year. In addition, we regularly provide project updates and announcements through ongoing press releases and updates to our corporate presentation, all of which are available on our [website](#).

PERFORMANCE DATA

Performance Data ^(1,2)

Indicator Title	Units	2017	2018	2019
HEALTH AND SAFETY				
Employees				
Fatalities	#	0	0	0
Total recordable injury frequency (TRIF) ⁽³⁾	#	0.19	0.25	0.34
Preventable motor vehicle incident frequency (MVI) ⁽⁴⁾	#	1.36	0.46	0.49
Lost time injury frequency rate (LTIFR) ⁽⁵⁾	#	0.31	0.25	0.42
Industry Average ⁽⁶⁾				
Fatalities	#	0	0	0
Total recordable injury frequency (TRIF) ⁽³⁾	#	0.43	0.49	0.72
Preventable motor vehicle incident frequency (MVI) ⁽⁴⁾	#	1.37	1.07	0.70
Third-Party Contractor				
Fatalities	#	0	0	0
Total recordable injury frequency (TRIF) ⁽³⁾	#	1.14	1.58	1.22
Preventable motor vehicle incident frequency (MVI) ⁽⁴⁾	#	1.82	1.26	1.45
Lost time injury frequency rate (LTIFR) ⁽⁵⁾	#	0.92	1.32	0.24
ASSET INTEGRITY				
Asset Integrity Investment				
Pipeline repairs and in-line inspections	\$ millions	48	47	59
Geotechnical	\$ millions	26	27	47
Facility integrity	\$ millions	8	3	3
Total asset integrity investment	\$ millions	82	77	109
Pipeline Repairs and In-Line Inspections (ILIs)				
Integrity digs completed	#	296	284	218
Total ILIs completed ⁽⁷⁾	#	91	88	97
Total ILI length ⁽⁷⁾	km	3,440	3,328	3,810
Percentage pipelines inspected	%	23	27	30
Incidents (Spills, Releases and Significant Failures)				
Reported significant failures ⁽⁸⁾	#	0	0	2
Reportable spills	#	7	5	8
Released substances from reportable spills	m ³	4	8	38
Reportable spill intensity	m ³ spilled/ mmboe delivered	0.0060	0.0075	0.0352

Indicator Title	Units	2017	2018	2019
Emergency Preparedness and Response				
Emergency preparedness and response exercises completed	#	45	51	70
Emergency preparedness and response training completed	# of responders	187	429	744
ENVIRONMENTAL STEWARDSHIP				
Energy and GHG Emissions^(9,10,11)				
Pipelines direct GHG emissions ⁽¹²⁾	tCO ₂ e	53,061	68,454	67,107
Facilities direct GHG emissions ⁽¹²⁾	tCO ₂ e	966,070	1,554,920	1,640,847
Total direct GHG emissions ⁽¹²⁾	tCO ₂ e	1,019,131	1,623,374	1,707,954
Pipelines direct emissions intensity	tCO ₂ e/BOE	0.000122	0.000106	0.000099
Facilities direct emissions intensity	tCO ₂ e/BOE	0.00427	0.00372	0.00408
Total direct emissions intensity	tCO ₂ e/BOE	0.00154	0.00153	0.00158
Pipelines indirect GHG emissions ⁽¹³⁾	tCO ₂ e	335,386	475,299	522,893
Facilities indirect GHG emissions ⁽¹³⁾	tCO ₂ e	686,223	936,071	856,157
Total indirect GHG emissions ⁽¹³⁾	tCO ₂ e	1,021,609	1,411,370	1,379,049
Pipelines indirect emissions intensity	tCO ₂ e/BOE	0.000771	0.000736	0.000773
Facilities indirect emissions intensity	tCO ₂ e/BOE	0.00303	0.00224	0.00213
Total indirect emissions intensity	tCO ₂ e/BOE	0.00154	0.00133	0.00128
Methane emissions	metric tonnes	6,633	5,327	4,918
Total energy consumed	GWh	1,365	2,206	2,164
Limiting regulations ⁽¹⁴⁾	%	56	45	40
Other Emissions^(9,10)				
Total NO _x emissions	metric tonnes	2,101	3,262	3,467
Total SO _x emissions	metric tonnes	778	1,581	1,651
Total VOCs	metric tonnes	1,312	10,183	4,879
Total particulate matter	metric tonnes	182	241	299
LAND USE & BIODIVERSITY				
High-risk assessments completed as part of historic liability program	%	100	100	100
Wellsites receiving reclamation certificate as part of wellsite reclamation program	% (cumulative)	34	46	52
Land reclaimed, protected or restored	acres (cumulative)	25.4 (169.8)	61.8 (231.6)	31.8 (263.4)

Indicator Title	Units	2017	2018	2019
WASTE				
Waste				
Total waste (non-hazardous + hazardous)	metric tonnes	263,042	581,937	595,262
Total non-hazardous waste	metric tonnes	244,427	527,565	543,395
Non-hazardous waste diverted from landfill (i.e., recycled)	metric tonnes	92,744	369,678	365,471
Non-hazardous waste sent to disposal (i.e., landfill, incineration)	metric tonnes	151,682	157,887	177,924
Total hazardous waste	metric tonnes	18,615	54,372	51,867
Hazardous waste sent for treatment	metric tonnes	507	1,182	1,578
Hazardous waste sent to disposal (i.e., landfill, incineration)	metric tonnes	18,109	53,190	50,289
WATER				
Water				
Total water withdrawal	million m ³	2.219	1.870	1.555
Total water disposed (i.e., regulated disposal facility or deep injection well)	million m ³	2.049	0.780	0.152
Total water returned to the environment	million m ³	0.870	1.089	1.039
ABORIGINAL & TRIBAL RELATIONS				
Environmental Technician Program Performance				
Program technicians trained	#	20	2	22
Program technicians subsequently employed by band-owned businesses	#	41	18	14
Communities represented in program	#	15	7	6
Pembina projects utilizing technicians	#	6	12	14
Aboriginal and Tribal communities engaged for services	#	37	36	43
Aboriginal and Tribal suppliers utilized	#	112	91	120

Indicator Title	Units	2017	2018	2019
COMMUNITY INVESTMENT ⁽¹⁵⁾				
Summary of Community Investment Program				
Value to communities (value of Company investments, employee giving and volunteering program)	\$ millions	6.9	11.4	14.5
Summary of Company Community Investment				
Cash investments (direct only)	\$ millions	4.1	7.5	10.0
In-kind investments	\$ millions	-(16)	-(16)	0.058
Employee giving	\$ millions	2.4	2.8	3.3
Employee time during work hours	\$ millions	0.24	0.33	0.47
Other	\$ millions	0.16	0.77	0.67
Summary of Employee Volunteering				
Employee and contractor hours volunteered (during working hours)	#	4,049	5,562	7,926
Hours per employee (during working hours)	#	2.5	2.9	3.2
WORKFORCE				
Workforce Overview ^(17,18)				
Permanent employees	#	1,528	1,894	2,515
Invoicing contractors ⁽¹⁹⁾	#	539	750	823
Fixed-term employees	#	75	86	127
New hire permanent employees	#	287	458	494
Workforce Composition ⁽²⁰⁾				
Men	#	1,101	1,377	1,702
	%	72	71	73
Women	#	427	563	634
	%	28	29	27
Aboriginal peoples	#	65	78	88
	%	4	4	4
Persons with disabilities	#	14	16	18
	%	1	1	1
Visible minorities	#	145	220	261
	%	9	11	11
Workforce Performance ⁽¹⁷⁾				
Total employee turnover	%	7.8	7.8	8.6
Voluntary employee turnover	%	3.7	4.9	4.9

Indicator Title	Units	2017	2018	2019
Workforce Diversity ⁽¹⁷⁾				
Executive team	# of male	5	7	7
	# of female	0	0	0
Vice presidents	# of male	13	15	14
	# of female	2	3	4
Senior managers & managers	# of male	75	129	158
	# of female	36	47	64
Other employees	# of male	1,005	1,206	1,676
	# of female	386	486	591
Workforce Age Demographic ^(17, 21)				
Total employees aged over 50+	#	-(16)	456	624
	%	-(16)	24	25
Total employees aged between 30 and 49	#	-(16)	1,205	1,530
	%	-(16)	64	63
Total employees under 30	#	-(16)	233	294
	%	-(16)	12	12
ECONOMIC CONTRIBUTIONS				
Company Financial Snapshot				
TSX common share trading price ⁽¹⁸⁾	\$/share	45.51	40.51	48.13
TSX 52-week trading range	\$/share	46.14 – 39.26	47.52 – 38.49	50.46 – 41.23
Market capitalization ^(18, 22)	\$ millions	22,892	20,580	26,375
Total enterprise value ^(18, 23)	\$ millions	34,556	32,235	40,468
Common share dividend paid	\$/share	2.02	2.23	2.35
Yield ⁽¹⁸⁾	%	4.75	5.63	5.24
Corporate credit rating ⁽²⁴⁾		BBB/BBB	BBB/BBB	BBB/BBB
Capital Investments and Acquisitions ⁽²⁵⁾				
Capital investments	\$ millions	1,839	1,226	1,645
Acquisitions	\$ millions	6,400	0	4,255

Indicator Title	Units	2017	2018	2019
Economic Value Generated, Distributed and Retained ⁽²⁶⁾				
Net revenue ⁽²⁷⁾	\$ millions	2,238	2,836	3,120
Total Economic Value Generated ⁽²⁸⁾	\$ millions	2,238	2,836	3,120
Operating and general and administrative expenses ⁽²⁹⁾	\$ millions	263	324	299
Employee wages and benefits	\$ millions	350	420	489
Payments to governments ⁽³⁰⁾	\$ millions	94	123	274
Payments to providers of capital ⁽³¹⁾	\$ millions	1,029	1,561	1,659
Community investments	\$ millions	4	8	10
Total Economic Value Distributed	\$ millions	1,740	2,435	2,731
Total Economic Value Retained	\$ millions	498	401	389
Taxes Paid				
Canadian taxes paid	\$ millions	14	75	227
U.S. taxes paid	\$ millions	34	(5)	(17)

Abbreviations

km - kilometres	MT - metric tonnes
m ³ – metres cubed	NOx - nitrogen oxide
mmbobe – millions of barrels of oil equivalent	SOx - sulphur oxide
tCO ₂ e – tonnes of carbon dioxide equivalent	VOC - volatile organic compounds
BOE- barrels of oil equivalent	MW - megawatts
GWh – gigawatt hours	ktCO ₂ e - kilotonnes of carbon dioxide equivalent

Footnotes

- Unless otherwise noted, the data reflects all Pembina majority-owned and operated assets. Assets which are jointly owned and which Pembina does not operate are excluded. Except where specifically noted, the assets assumed by way of the acquisition of Kinder Morgan Canada Limited and the U.S. portion of the Cochin Pipeline system, which closed on December 16, 2019, are also excluded from the reported data.
- Prior periods (2017-2018) have been restated from data reported in Pembina's 2019 Sustainability Data Update as a result of new available information or a change in methodology.
- Total recordable injury frequency rate (TRIF) is defined as the number of recordable injuries per 200,000 hours of work.
- Motor vehicle incident frequency rate (MVI) is the number of preventable incidents per 1,000,000 km driven.
- Lost Time Injury Frequency Rate (LTIFR) are based on 1,000,000 hours of work.
- Industry average based on employee data from member companies reported by the Canadian Energy Pipeline Association (CEPA).
- Included in this total is maintenance ILLs and post construction ILLs.
- Pembina uses CEPA's definition of a significant failure incident – a failure incident that includes one or more of the following: caused a serious injury or fatality, caused a liquid release of greater than 8 m³ (50 US barrels), produced an unintentional ignition or fire, or occurred as a rupture.
- Pembina participates in the following applicable regulated emissions reporting programs: Canadian Greenhouse Gas Emissions Reporting Program, British Columbia Greenhouse Gas Industrial Reporting and Control Act, Alberta Specified Gas Reporting Regulations, Alberta Carbon Competitiveness Incentive Regulations, Saskatchewan Management and Reduction of Greenhouse Gases Regulations and Standards, Ontario Greenhouse Gas Emissions Reporting (O Reg. 390/18) and the Canadian Natural Pollutant Release Inventory Reporting Program.
- The reported emissions are based on operational control and direct emissions sources primarily using metered fuel volumes or invoiced volumes; however, in instances where metering data is not available, calculated emissions from sources were determined using industry best practices and accepted regulatory methodologies.
- The revisions are the result of changes to Pembina's calculation methodology.

- ¹² Direct GHG Emissions (Scope 1) sources in the reported data include emissions from operational stationary combustion equipment, fugitive component leaks, as well as flaring, incineration and venting activities at gas processing facilities, and vented emissions from above ground storage tanks.
- ¹³ Indirect GHG Emissions (Scope 2) sources in the reported data include the electrical consumption used to power natural gas and processing plants, NGL processing plants and the various pipeline systems operated by Pembina. Waste heat imported into our NGL processing plants from a third-party source is not currently included in this report. Sources of indirect emissions, such as those from office buildings or communication towers are not currently included in this report. Scope 3 emissions (e.g., employee travel, supply chain emissions or upstream/downstream hydrocarbon emissions) are currently not included in this report.
- ¹⁴ Percent of emissions which fall under emissions-limiting regulations (i.e., cap and trade or carbon price systems).
- ¹⁵ Assets excluded from Community Investment include: VMLP and Aux Sable.
- ¹⁶ Metrics were not available as data was not tracked on a comparable basis and/or due to revisions to the calculation methodology.
- ¹⁷ Workforce data for 2019 includes the assets assumed by way of the acquisition of Kinder Morgan Canada Limited and the U.S. portion of the Cochin Pipeline system, which closed on December 16, 2019.
- ¹⁸ At December 31 each year.
- ¹⁹ Represents invoicing contractors as of December 31. These numbers fluctuate throughout the year based on business requirements.
- ²⁰ Represents Canadian workforce only. Temporary employees added in for 2018 and 2019.
- ²¹ Excluded from the 2019 figures are 67 U.S. employees associated with the acquisition of Kinder Morgan Canada Limited and the U.S. portion of the Cochin Pipeline system, which closed on December 16, 2019. Diversity information (including age) was not tracked for these employees, however we intend to report this information in later reports.
- ²² Market capitalization includes common shares.
- ²³ Total enterprise value includes common shares, convertible debentures, preferred shares and proportionately consolidated debt less cash.
- ²⁴ DBRS and S&P.
- ²⁵ This economic section accounts for all Pembina assets excluding Equity Accounted Investees.
- ²⁶ This report refers to the terms net revenue, total economic value generated, payments to governments, payments to providers of capital, total economic value distributed and total economic value retained, which do not have any standardized meaning under IFRS ("Non-GAAP Measures"). Please refer to "Non-GAAP Measures" in the Company's other disclosure including the quarterly and annual Management Discussion and Analysis available on SEDAR or at www.pembina.com. This report also refers to certain other terms commonly used to satisfy sustainability reporting requirements. These terms are not necessarily used by Pembina in the management of business. This economic section accounts for all Pembina assets excluding Equity Accounted Investees.
- ²⁷ Net Revenue represents revenue less cost of sales. See "Non-GAAP Measures".
- ²⁸ Economic Value Generated is equivalent to Net Revenue. See "Non-GAAP Measures".
- ²⁹ Operating expenses plus general and administrative expenses less personnel expenses.
- ³⁰ Current income taxes plus property taxes.
- ³¹ Dividends paid plus net finance cost plus interest paid during construction.

GRI Content Index

This is a GRI-referenced report.

GRI Standard	Disclosure	Location	Page
GRI 101: Foundation 2020			
General Disclosures			
GRI 102: General Disclosures 2016	Organizational profile		
	102-1 Name of the organization	Title page	i
	102-2 Activities, brands, products, and services	About Pembina; 2019 Annual Information Form	9,23
	102-3 Location of headquarters	About Pembina; 2019 Annual Information Form	9,18
	102-4 Location of operations	About Pembina; 2019 Annual Report	9,70
	102-5 Ownership and legal form	The Notice of 2020 Annual Meeting of Shareholders and Management Information Circular	6
	102-6 Markets served	About Pembina; 2019 Annual Report; 2019 Annual Information Form	9,70, 23
	102-7 Scale of the organization	2019 Annual Report	3
	102-8 Information on employees and other workers	2019 Performance at a Glance; Social Well-being - Workforce; Performance Data	8,53, 62
	102-9 Supply chain	Our Approach to Sustainability - Supply Chain Management	24
	102-10 Significant changes to the organization and its supply chain	2019 Annual Information Form	19
	102-12 External initiatives	About This Report - Our Sustainability Reporting Approach	3
	102-13 Membership of associations	Our Approach to Sustainability; Health and Safety; Asset Integrity; Energy and GHG Emissions	11,27, 31,37
	Strategy		
	102-14 Statement from senior decision-maker	Message from our President and CEO	5
	102-15 Key impacts, risks, and opportunities	2019 Annual Report; 2019 Annual Information Form	38,65
	Ethics and integrity		
	102-16 Values, principles, standards, and norms of behaviour	Corporate Policies; Business Ethics; 2019 Annual Information Form	19,20, 40
102-17 Mechanisms for advice and concerns about ethics	Corporate Policies - Business Ethics; Whistleblower Hotline	20	
Governance			
102-18 Governance structure	Our Approach to Sustainability - Governance and Management Structure; The Notice of 2020 Annual Meeting of Shareholders and Management Information Circular	14,24	

GRI 102: General Disclosures 2016	102-19 Delegating authority	Our Approach to Sustainability - Governance and Management Structure; The Notice of 2020 Annual Meeting of Shareholders and Management Information Circular	14,39	
	102-20 Executive-level responsibility for economic, environmental, and social topics	Our Approach to Sustainability - Governance and Management Structure; The Notice of 2020 Annual Meeting of Shareholders and Management Information Circular	18,28	
	102-21 Consulting stakeholders on economic, environmental and social topics	Stakeholder Engagement; Social Well-being - Aboriginal and Tribal Engagement	25,48	
	102-22 Composition of the highest governance body and its committees	Our Approach to Sustainability - Governance and Management Structure; The Notice of 2020 Annual Meeting of Shareholders and Management Information Circular	15,13, 32	
	102-23 Chair of the highest governance body	The Notice of 2020 Annual Meeting of Shareholders and Management Information Circular	14,32	
	102-24 Nominating and selecting the highest governance body	The Notice of 2020 Annual Meeting of Shareholders and Management Information Circular	9,32	
	102-25 Conflicts of interest	The Notice of 2020 Annual Meeting of Shareholders and Management Information Circular	38	
	102-26 Role of highest governance body in setting purpose, values and strategy	Our Approach to Sustainability - Governance and Management Structure; The Notice of 2020 Annual Meeting of Shareholders and Management Information Circular	15, 24-25	
	102-27 Collective knowledge of highest governance body	The Notice of 2020 Annual Meeting of Shareholders and Management Information Circular	13,34	
	102-28 Evaluating the highest governance body's performance	The Notice of 2020 Annual Meeting of Shareholders and Management Information Circular	38	
	102-29 Identifying and managing economic, environmental and social impacts	Our Approach to Sustainability - Governance and Management Structure; The Notice of 2020 Annual Meeting of Shareholders and Management Information Circular	16,28	
	102-30 Effectiveness of risk management processes	Our Approach to Sustainability - Governance and Management Structure; The Notice of 2020 Annual Meeting of Shareholders and Management Information Circular	22,27	
	102-31 Review of economic, environmental and social topics	Our Sustainability Reporting Approach; The Notice of 2020 Annual Meeting of Shareholders and Management Information Circular	4,28	
	102-32 Highest governance body's role in sustainability reporting	Our Approach to Sustainability - Governance and Management Structure; The Notice of 2020 Annual Meeting of Shareholders and Management Information Circular	14,28	
	102-35 Remuneration policies	The Notice of 2020 Annual Meeting of Shareholders and Management Information Circular	29, 46-52	
	102-36 Process for determining remuneration	The Notice of 2020 Annual Meeting of Shareholders and Management Information Circular	53-72	
	102-37 Stakeholders involvement in remuneration	Our approach to sustainability - executive compensation; The Notice of 2020 Annual Meeting of Shareholders and Management Information Circular	18,4	
	Stakeholder engagement			
	102-40 List of stakeholder groups	Stakeholder Engagement; Social Well-being - Aboriginal and Tribal Engagement	26,48	
	102-42 Identifying and selecting stakeholders	Stakeholder Engagement; Social Well-being - Aboriginal and Tribal Engagement	26,48	

GRI 102: General Disclosures 2016	102-43 Approach to stakeholder engagement	Stakeholder Engagement; Social Well-being - Aboriginal and Tribal Engagement	26,48
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	102-51 Date of most recent report	Fall 2018 Sustainability Report, Fall 2019 Performance Data Report, Message from President and CEO	5
	102-52 Reporting cycle	About this Report	3
	102-53 Contact point for questions regarding the report	Our Sustainability Reporting Approach	4
	102-54 Claims of reporting in accordance with the GRI Standards	Our Sustainability Reporting Approach	4
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Economic Performance			
GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed	Economic Contributions; Performance Data	57,64
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GRI 302: Energy 2016	302-1 Energy consumption within the organization	Performance Data	60
Energy			
GRI 303: Water And Effluents 2018	303-3 Water withdrawal	2019 Performance at a Glance; Environmental Stewardship - Water; Performance Data	8,44, 61
	303-4 Water discharge	2019 Performance at a Glance; Environmental Stewardship - Water; Performance Data	8,44, 61
	303-5 Water consumption	Environmental Stewardship - Water; Performance Data	44,61

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GRI 304: Biodiversity 2016	304-2 Significant impacts of activities, products, and services on biodiversity	2019 Performance at a Glance; Environmental Stewardship - Land Use and Biodiversity; Performance Data	8,41,60
	304-3 Habitats protected or restored	2019 Performance at a Glance; Environmental Stewardship - Land Use and Biodiversity; Performance Data	8,41,60
Emissions			
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	2019 Performance at a Glance; Environmental Stewardship - Energy and GHG Emissions; Performance Data	8,36,60
	305-2 Indirect (Scope 2) GHG emissions	2019 Performance at a Glance; Environmental Stewardship - Energy and GHG Emissions; Performance Data	8,36,60
	305-4 GHG emissions intensity	2019 Performance at a Glance; Environmental Stewardship - Energy and GHG Emissions; Performance Data	8,38,60
	305-7 Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	Performance Data	60
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GRI 306: Waste 2020	306-3 Waste generated	2019 Performance at a Glance; Environmental Stewardship - Waste; Performance Data	8,43,61
GRI 400 Social Standards Series			
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GRI 401: Employment 2016	401-1 New employee hires and employee turnover	2019 Performance at a Glance; Social Well-being - Workforce; Performance Data	8,54,62
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GRI 403: Occupational Health and Safety 2018	403-9 Work-related injuries	2019 Performance at a Glance; Safety and Asset Integrity - Health and Safety; Performance Data	8,29,59
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GRI 404: Training and Education 2016	404-2 Programs for upgrading employee skills and transition assistance programs	2019 Performance at a Glance; Social Well-being - Aboriginal and Tribal Relations; Performance Data	8,49,61
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GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	Our Approach to Sustainability - Governance and Management Structure; The Notice of 2020 Annual Meeting of Shareholders and Management Information Circular	17,13

SASB Table

Topic	Code	Accounting Metric	Response, Link or Additional Information
Greenhouse Gas Emissions	EM-MD-110a.1	Gross global Scope 1 emissions	1,707,954 tCO2e
		Percentage methane	Based on total methane emissions for 2019 (from Scope 1 emission sources = 4,918 tonnes CH4), the methane emissions (converted to Carbon Dioxide equivalent) represents 7.2% of the total Scope 1 emissions.
		Percentage covered under emissions-limiting regulations	40
	EM-MD-110a.2	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	Information is not disclosed
Air Quality	EM-MD-120a.1	Air emissions of the following pollutants: (1) NOx (excluding N2O)	3467
		(2) SOx	1651
		(3) volatile organic compounds (VOCs)	4879
		(4) particulate matter (PM10)	299
Ecological Impacts	EM-MD-160a.1	Description of environmental management policies and practices for active operations	Through the Governance, Nominating and Corporate Social Responsibility Committee and Safety and Environment Committee, Pembina develops and implements sustainable business practices and development. To ensure responsible environmental practices, Pembina has implemented a number of policies and procedures that are adhered to in all of its operations, including, but not limited to: <ul style="list-style-type: none"> • Operating Management Systems • Health, Safety and Environment Policy • Environmental Management Program • Asset Integrity Management Program • Operations and Maintenance Program
	EM-MD-160a.4	Number and aggregate volume of hydrocarbon spills	8 spills, 38m ³
		Volume in the Arctic	0 (We do not have any operations in the Arctic Region)

Operational Safety, Emergency Preparedness & Response	EM-MD-540a.2	Number of reportable pipeline incidents	Information is not disclosed
		Percentage significant	Information is not disclosed
	EM-MD-540a.4	Percentage of (1) natural gas and (2) hazardous liquid pipelines inspected	(1) 30%; (2) Information is not disclosed
		Discussion of management systems used to integrate a culture of safety and emergency preparedness throughout the value chain and project lifecycles	<p>Pembina has a number of internal policies and programs that integrate a culture of safety in the work that we do and the systems we operate. These include, but are not limited to:</p> <ul style="list-style-type: none"> • Health, Safety and Environment Policy • Safety Program • Emergency Management Program • Security Management Program • Damage Prevention Program • Public Awareness Program • Asset Integrity Management Program • Pipeline Control Management Program • Operations and Maintenance Program <p>Pembina plans for emergencies through their Corporate Emergency Management Plan as well as emergency response plans, which are evaluated for effectiveness and updated on a regular bases. They include roles and responsibilities, key contact information, public protection measures as well as other levers to ensure proper steps are taken in the event of an emergency.</p> <p>Pembina ensures potential responders are adequately trained to respond to a release by providing training sessions that include:</p> <ul style="list-style-type: none"> • Tabletop exercises to review procedures • Functional and full-scale exercises to practice skills • Equipment deployment to test our resources

ADVISORIES

Forward-Looking Statements and Information

This report contains certain forward-looking statements and information that are based on Pembina's expectations, estimates, projections and assumptions considering its experience and its perception of historical trends as well as current market conditions and perceived business opportunities. In some cases, forward-looking information can be identified by terminology such as "expects", "will", "would", "anticipates", "plans", "estimates", "develop", "intends", "potential", "continue", "could", "forecast", "create", "keep", "believe", "aim", "endeavor", "commit" and similar expressions suggesting future events or future performance.

In particular, this report contains forward-looking statements pertaining to, without limitation: plans, targets, and strategies with respect to reducing greenhouse gas emissions, including as part of Pembina's Carbon Stand; intended outcomes resulting from the Carbon Stand; plans and strategies to improve ESG performance, including as such relates to compensation methodologies; plans to achieve certain diversity targets at each of the board, executive and employee levels through the implementation of the Inclusion and Diversity Stand and under the Board Diversity Policy, as the case may be; future opportunities related to hydrocarbon production; the potential impacts of the COVID-19 pandemic, and Pembina's response thereto; the Board's approach to shareholder proposals as part of its review of executive compensation; plans to further develop continued community investment and engagement efforts; reporting and monitoring systems; programs for risk management, workplace safety, vehicle safety, emergency preparedness, process improvement; the timing of audits of Pembina's service providers and equipment suppliers to track insurance, health and safety programs, injury and incident statistics, and workers' compensation information on onsite service providers; participation in industry initiatives and integrity programs; strategies to protect the integrity of energy infrastructure; asset integration plans in respect of recently acquired assets; future environmental monitoring and management programs; Pembina's approach to engaging with its various stakeholders; anticipated in-service dates for growth projects; further expansion opportunities; timing of the implementation of an integrated vegetation management program and the components thereof; the expansion and implementation of waste management programs; strategies in respect of water management, data collection and reporting, including the development of a Surface Management Matrix; strategies for Aboriginal and Tribal engagement, inclusion and reconciliation; and anticipated community and economic benefits of growth projects.

Undue reliance should not be placed on these forward-looking statements and information as they are based on assumptions made by Pembina as of the date hereof regarding, among other things: oil and gas industry exploration and development activity levels and the geographic region of such activity; that current technologies are sufficient to achieve reductions in GHG emissions targets; the success of Pembina's operations; the availability of individuals with the skills required for Pembina's business and in the geographic locations in which Pembina operates necessary to achieve Pembina's Inclusion and Diversity Stand and to abide the Board Diversity Policy; that Pembina's future results of operations will be consistent with past performance and management expectations in relation thereto; broad compliance with Pembina's plans, strategies, programs and goals across its reporting and monitoring systems among its employees, stakeholders and service providers; the continued availability of capital at attractive prices to fund future capital requirements relating to existing assets and projects; the willingness of Aboriginal and Tribal stakeholders to engage in consultation and reconciliation efforts; the success of growth projects; the availability of data, samples and information necessary to develop and evaluate targets, goals, programs and strategies; that counterparties to agreements will continue to perform their obligations in a timely manner; that there are no unforeseen material construction or other costs related current projects or operations; prevailing regulatory, tax, and environmental laws and regulations; the amount of future liabilities relating to lawsuits and environmental incidents and the availability of coverage under Pembina's insurance policies.

While Pembina believes the expectations and assumptions reflected in these forward-looking statements are reasonable as of the date hereof, there can be no assurance that they will prove to be correct. Forward-looking statements are subject to known and unknown risks and uncertainties which may cause actual performance and financial results to differ materially from the results expressed or implied, including but not limited to: the regulatory environment and decisions, and Aboriginal and landowner consultation requirements; the failure to realize the benefits or synergies from acquired assets; reliance on third parties to successfully operate and maintain certain assets; labour, human capital and material shortages; reliance on key relationship and agreements and the outcome of stakeholder engagement; the strength and operations of the oil and natural gas industry and related commodity prices; non-performance or default by counterparties to agreement which Pembina or one or more of its subsidiaries has entered into in respect of its business; actions by joint venture partners or other partners which hold interests in certain of Pembina's assets; actions by governmental and regulatory authorities, including changes in regulatory processes or increased environmental regulation; fluctuations in operating results; adverse general economic and market conditions in Canada, North America and worldwide; risks related to the current and potential impacts of the COVID-19 pandemic and depressed commodity prices; constraints on, or the unavailability of adequate infrastructure and technology; changes in the political environment, in North America and elsewhere, and public opinion; ability to access sources of debt and equity capital; changes in credit ratings; technology and security risks including cyber-security risks; and natural catastrophes.

Additional information on these factors as well as other risks that could impact Pembina's operational and financial results are contained in Pembina's AIF and annual management discussion and analysis (MD&A) for the year ended December 31, 2019, and Pembina's interim MD&A for the three and nine months ended September 30, 2020 and described in our public filings available in Canada at www.sedar.com and in the United States at www.sec.gov. Readers are cautioned that this list of risk factors should not be construed as exhaustive.

The forward-looking statements contained in this document speak only as of the date of this document. Except as expressly required by applicable securities laws, Pembina and its subsidiaries assume no obligation to update forward-looking statements and information should circumstances or management's expectations, estimates, projections or assumptions change. The forward-looking statements contained in this document are expressly qualified by this cautionary statement.

Non-GAAP Measures

In this document, Pembina has used the terms net revenue, adjusted earnings before interest, taxes, depreciation and amortization (adjusted EBITDA), total economic value generated, payments to governments, payments to providers of capital, community investments, total economic value distributed and total economic value retained, which do not have any standardized meaning under IFRS ("Non-GAAP Measures"). Since Non-GAAP Measures do not have a standardized meaning prescribed by GAAP and are therefore unlikely to be comparable to similar measures presented by other companies, securities regulations require that Non-GAAP Measures are clearly defined, qualified and reconciled to their nearest GAAP measure. Net revenue and adjusted EBITDA are calculated and disclosed on a consistent basis from period to period. The intent of Non-GAAP Measures is to provide additional useful information respecting Pembina's financial and operational performance to investors and analysts and the measures do not have any standardized meaning under IFRS. The measures should not, therefore, be considered in isolation or used in substitute for measures of performance prepared in accordance with IFRS.

This report refers to certain other terms commonly used to satisfy sustainability reporting requirements. These terms are not necessarily used by Pembina in the management of the business.

Non-GAAP Proportionate Consolidation of Investments in Equity Accounted Investees Results

In accordance with IFRS, Pembina's jointly controlled investments are accounted for using equity accounting. Under equity accounting, the assets and liabilities of the investment are net into a single line item in the Consolidated Statement of Financial Position, Investments in Equity Accounted Investees. Net earnings from Investments in Equity Accounted Investees are recognized in a single line item in the Consolidated Statement of Earnings and Comprehensive Earnings, share of profit from equity accounted investees. Cash contributions and distributions from Investments in Equity Accounted Investees represent Pembina's proportionate share paid and received in the period to and from the equity accounted investment.

Other issuers may calculate these Non-GAAP Measures differently. Investors should be cautioned that these measures should not be construed as alternatives to revenue, earnings, cash flow from operating activities, gross profit or other measures of financial results determined in accordance with GAAP as an indicator of Pembina's performance. For additional information regarding Non-GAAP Measures, including definitions and reconciliations of net revenue and adjusted EBITDA to measures recognized by GAAP, please refer to Pembina's management's discussion and analysis for the applicable periods as referenced in this document which are available online at www.sedar.com, www.sec.gov and through Pembina's website at www.pembina.com.

Pembina Pipeline Corporation

